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ABSTRACT

Traditional dormitories are out of step with the concepts of higher education that make the 4 years of college a cultural and social experience as well as a period for gathering information on academic topics. These experiences are not served well in twin-bed rooms lined along both sides of corridors that lead only to stairwells or gang bathrooms. This publication is about economical ways to provide better housing for students. It advocates humanizing existing dormitories by changing the standard double rooms into suites of bedrooms sharing a living room. For colleges needing new residences it recommends building suites or apartment-type accommodations since colleges that have used these approaches report warm response from their students. The book also touches on alternatives to traditional methods for obtaining new residences through management techniques, leasing buildings or forming co-ops. These variations on the old processes can provide superior facilities and also circumvent the fiscal bind where colleges have operating expenses by not enough capital funds. (Author/HS)

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Providing housing for students is more than just throwing up a barrack block and calling it something or other Hall. Traditional dormitories are out of step with the concepts of higher education that make the four years of college a cultural and social experience as well as a period for gathering information on academic topics. These experiences are not served well in twin-bed rooms lined along both sides of corridors that lead only to stairwells or gang bathrooms. Housing should offer students a delight in living so that they can behave as individuals at one moment and indulge their gregariousness the next.

This EFL publication is about economical ways to provide better housing for students. We advocate humanizing existing dormitories by changing the standard double rooms into suites of bedrooms sharing a living room. For colleges needing new residences we recommend building suites or apartment-type accommodations since colleges that have used these approaches report warm response from their students. The book also touches upon alternatives to traditional methods for obtaining new residences through management techniques, leasing buildings or forming co-ops. These variations on the old processes can provide superior facilities and also circumvent the fiscal bind where colleges have operating expenses but not enough capital funds.

Budgets were once blamed for most of the insufficiencies in student housing, but, as this book shows, a lot can be done with a little money if the administration is amenable. Rules of conduct can be relaxed at no cost and yet considerably change the ambiance of a dormitory. When the rules relax and the rooms are converted into suites, the students find themselves in a different world. And it is precisely a world that is different from the rigorous academic life that many students want.

However, another approach is simultaneously finding favor: the unseparating of living and learning so that the building where students live becomes a place where they also learn. It doesn't work for all college situations, but it succeeds with motivated students and could convert a lot more.

Student Housing was researched for EFL by George Buchanan, Valerie Lucznikowska and Don Watson and written by Judy Tolmach. The chapter on cooperative housing draws on material written by John Piercey for the Academy for Educational Development.

EDUCATIONAL FACILITIES LABORATORIES

To look ahead to 1980 takes courage, especially for college administrators. The figures confronting them are astounding:

- A predicted 50% increase in college students—from 7½ million to 11 million.
- College enrollment of 41% of the 18–21 year olds (compared with 35% in 1970).
- An increasing number of students who stay in college for more than four years.

If the expected influx does occur, every aspect of college life will suffer the strains of overcrowding—dormitories most of all. Assuming that institutions will need to provide housing for only half of the increased number of students (because about 55% of all students attending college live in residence halls), the figures are still sobering: 2 million new spaces will be required in the next decade.

If the problem were simply one of numbers, the solution would be one of money only. The problem, however, is not just quantity. At colleges throughout North America, dormitory rooms stand empty because students choose not to live in them. No longer content with a roof over their heads, three square meals a day and a roommate chosen by a computer, students are asking for dormitories that are vital places to live in. They want places that provide for privacy and intimate socialization as well as for the various life-styles that characterize college-age youth. Students are quick to point out that use of a double room by two people for sleeping, studying and socializing—all quite different uses of the same room—makes it extremely difficult or impossible for either roommate to have free control over his own space or schedule.

No longer wanting to live in cloistered isolation, students are clamoring for housing that is "relevant," that reflects the concerns, the mores and the tempo of the outside world. "Considering the preferences of students for recreation, entertainment and political action along with eating and sleeping, the desired pattern of living suggests the polyglot excitement of a Latin Quarter rather than the uniform amenities of the familiar residential college." This opinion from *Housing*, by the Student Community Housing Corporation at Yale University, would find favor on many other campuses. Complaining of the "insularity" of student life, the Yale study envisions a university in which there are "no rigid demarcations between the places where the members of the university work and the places where they live."

New buildings get more expensive all the time, as construction costs, interest rates and maintenance costs soar. So how can a beleaguered administrator build a dormitory that will have the ambiance of a Latin Quarter and at the same time be economical and functional? Not an easy question. Yet it is a serious question, because the college landscape is littered with huge, high-rise dorms that are partially or even entirely empty. Until five years ago, students were eager to settle for life in the dorm—any dorm. Many grumbled about the

restrictions of dormitory living—and the institutional food—but few did anything more drastic than complain and deface the walls. No more. Now dormitories which are 20% empty are commonplace. Students are moving off campus, choosing to pay high rents to live in substandard "pads" rather than submit to the rules and regulations or the ubiquitous double bedrooms of dormitory life.

Those who move out—and those who stay on campus because they have nowhere else to go—complain about the lack of privacy, the lack of freedom and the strained relationships with dormmates. They resent the uniformity of the dormitory which, to them, seems to reflect the university's attitude about students in general; they conclude that if all the rooms and all the corridors are alike, university administrators must think all students are alike also. To a generation aching to express its own identity, this symbolic suggestion of uniformity is as offensive as the parietal rules which imply that students are untrustworthy and irresponsible. In times past, college administrators were not forced to consider the underlying implications of a building or a set of rules. Accused of building inhuman, monotonous buildings, an administrator had only to explain that monotony was cheaper. Such explanations no longer satisfy students who insist that the buildings they live in affect the way they think and feel. It is no longer enough for planners to consider the number of beds per square foot in a dormitory; now they must give equal weight to the quality of life per square foot.

At schools where student preferences have been reflected in the design (or remodeling) of buildings, the results have been well worth the effort. At MIT, Cornell and Michigan State the least popular dorms on campus have been transformed into dormitories with waiting lists. Other schools have encouraged students to aid in the planning of new buildings, and the results have been not only successful but economical, proving that giving students what they want does not necessarily cost more than giving them what they don't want. One part of the problem is that at many schools housing officials stubbornly insist that it is the students, not the dormitories, that need to change. Where housing officials are willing to listen to students and to treat their needs with sensitivity and respect, dorms are filled and their occupants satisfied.

Although the number of disaffected students is considerable, it would be a distortion to suggest that they are in the majority. A 1969 study at Michigan State University indicated that at least 50% of the students were satisfied with their on-campus accommodations. However, since dormitories are built with long-term, self-liquidating loans, the other 50%—those who are less than satisfied with dorm life—can add up to financial disaster: each empty room increases the budget deficit.

Empty dorms are a loss that cannot be measured solely in dollars and cents. Commuter colleges are incapable of generating a sense of unity or

loyalty or belonging. They tend to become coldly efficient knowledge factories to which student-workers commute each day. The college with empty beds is poor in more ways than one; studies suggest that the more innovative, mature and energetic students are the first to leave the campus.

Statistical projections indicate that in ten years' time, the average age of college students will be several years older than today. It is safe to predict that the traditional "caretaker" dorms (those dorms that separate men from women and have neither private baths nor kitchens) will be even less successful in meeting the needs of an older student population.

At large urban universities, dissatisfied dormitory residents are discovering that they cannot move off campus even if they want to. The sheer numbers of new students entering each year threatens to swamp many university communities. It causes students and low-income families to compete for the same scarce housing, and that spells trouble in many areas.

As student populations increase and the supply of off-campus housing decreases, administrators will face three choices. They can build new dormitories, remodel existing buildings or get out of the housing business. Since the costs of running dorms often exceed their income, many colleges would like to shed the burden of being in the housing business. Increased difficulties may spur some of them to opt out. One subtle way out is for a college to nominally fulfill its obligation of providing housing yet not accommodate any undergraduates. This is done by building apartments for married students, most of whom are pursuing graduate studies. There's an additional bonus in this ploy, because by strengthening its graduate program a college automatically raises its status in the academic world.

Colleges that continue to provide dorms for undergraduate students should learn from recent experiences and involve students in the design of future dorms. Before launching any kind of building program, the administrators should collect and assess student opinion about the strengths and weaknesses of existing and planned facilities. And before planning any kind of residential quarters, the college should discuss with students the proposed patterns of responsibility for social conduct, academic counseling, informal student programs, as well as more mundane topics such as cleaning and maintenance.

Some schools have found it useful to set up a permanent housing board with members drawn from the student body, the faculty and the administration. The University of Kansas established a board of this kind in 1963; not only is it responsible for recommending and evaluating long-range plans, but it also manages the day-to-day job liaison between students and housing administrators, thus preventing small problems from growing to crisis proportions.

Since no one knows more about dormitories than the students who live in them, it is reasonable to expect that, in the future, students will play an important role in influencing the design of new facilities. Students in 1972 generally agree that they cannot run things alone, but that a combination of students, administration and faculty can create a responsive guidance for college life. For example, although student-owned cooperative housing is nominally a student endeavor, it is often helped with administrative counseling or run by graduate or senior students with experience in housing programs. Regrettably, in situations where there is no responsive contact between administration and students, possible changes in dorm life are often lost in the rhetoric of conflict. Improvements such as coeducational dorms, co-ops, dorm-based seminars and student government were brought on by student activism, but ultimately made to work by university guidance and sponsorship.

Search for Identity

The major mark of institutional environments is that they are standardized and uniform. The meaning of the message is unambiguous: people are not competent to affect their immediate environment; people are not worth much. (*Sim Van der Ryn and Murray Silverstein*, Dorms at Berkeley: an environmental analysis.)

The large influx of students onto university campuses after World War II gave rise to a surfeit of dormitories that are remarkably cold, stark, inhuman and monotonous. Inside, long double-loaded corridors (reminiscent of the "last mile") are designed with slide-rule precision; huge, glassy common rooms furnished with neat rows of chrome and leatherette seats are mute testament to a time when colleges frowned on intimacy and individuality. In retrospect, it is easy to understand why these buildings and the students they were meant to house would come into conflict. And, with that same hindsight, one could say that students learn in the classroom to be dissatisfied with the conformity imposed on them in the dormitory. There is, then, on many campuses a dichotomy between academic life and the life in the dorm.

Herman P. Miller, former director of the Census Bureau's population studies, observes, "We know from many different studies that college graduates hold different values. They tend to be more liberal politically, more concerned with the society around them than with their own particular needs. It's entirely possible that some, if not much, of what we call the generation gap is related to education."

Sociologist Kenneth Keniston explains it this way: "Social conflicts do flow from increased education. A person attached to traditional concepts accepts the idea of law and order, for instance. The college-educated person is more likely to ask, 'Is the law a just law?' "

To psychoanalyst Erik H. Erikson establishing an identity is the major crisis of adolescence. "The adolescent needs to redefine himself in personal, social and occupational terms after the revolution of sexual maturation. It is important that he make this redefinition, or identity, relevant to the adult world. This may require the transient assumption of a number of different and divergent identities before deciding which is the most appropriate. Some of the identities will seem inappropriate or disturbing to family and friends."

It is this identity crisis that prompts sociologists Christopher Jencks and David Reisman to state that "one of the functions of the residential college is to emancipate the young from the inevitable limitations of their home and neighborhood before it is too late."

College is no longer a place where the older generation can with solemn ceremony hand its cultural values—wrapped as a gift—on to a new generation. Now college is the place where the young go to seek and experiment with their own identity.

their own culture. Dormitories can provide a stage for these experiments.

The dormitories built in the last fifty years were not, however, designed as places of discovery, nor were they designed as laboratories for experimenting with different life-styles. University administrators have assumed the obligation of providing efficient, compact housing for a maximum number of students in minimum space, if possible close to classes, otherwise on available land. They have built indestructible, inflexible structures, measuring the living area in terms of either "beds" or "spaces." Physical layout resembles turn-of-the-century prisons, monoliths of concrete and brick. A relentless corridor cuts each floor, separating double-occupancy rooms. Gang baths bedeck either end of the corridor. Dining halls and impersonal lounges that look like bus terminals complete the picture. If a house mother and rules are added, the result is instant-prison for the hapless student who has to live there.

If the psychologists and sociologists are correct in their conviction that the search for identity and informal activity outside the classroom is part of the personal development process and, therefore, an important aspect of college life, then dormitories will have to change. They will have to become congenial places for students sharing, in various degrees of intensity and individuality, a process of learning and growth.

Talking with Students

Many college administrators insist that it is futile to attempt to build dormitories that will satisfy students because "they don't know what they want" or because "no matter how much you give them, they always want something more." This is a culture gap that can easily be closed if administrators and faculty keep in touch with their students.

A student housing study funded by EFL and conducted by architecture students at Pennsylvania State University canvassed the housing situation at colleges and universities across the country. The report (*Housing: Issues of Concern to Students*, National Association of College and University Residence Halls, Pennsylvania State University, 1971) demonstrates a consistent pattern of discontent and an equally consistent litany of unmet needs. Two-thirds of the students who had moved off campus because they found dormitory life oppressive expressed a desire to return to the campus if they were offered:

1) A variety of living options from which to choose;

2) A chance for small groups to establish a feeling of closeness through shared interests;

3) Privacy, meaning control over one's environment and an absence of rules and regulations;

4) The option of renting rooms without board.

To no one's surprise, the Penn State study indicates that there is no ideal dormitory arrangement

guaranteed to please everyone. What students want is the chance to choose from a variety of living options: coeducational dorms, apartments, suites, special interest dorms, dorms with snack bars instead of dining rooms. Little amenities—private telephones and kitchenettes, carpeting, small cozy "rap rooms", the right to paint rooms and hallways—go a long way toward dispelling the institutional atmosphere that drives students off campus.

There is no one kind of student housing, because there is no one kind of student. Returning Vietnam veterans are accustomed to different kinds of living spaces than freshmen who have spent their first 18 years cosseted in safe suburbs. Since interrupting a college education with a few years of experience in the "real" world is becoming ever more prevalent, housing for married students—with and without children—must be provided. Some students relish the challenge or the savings of cooking and cleaning for themselves; others want—and can afford—the luxury of fully serviced dorms. There are even students who resent having anything done for them; they want to own (or lease) their own residences, which is certainly a legitimate learning experience.

A detailed study (*Student Housing: A Report to the Statutory Commission*, Madison, Wisconsin, April 1971) enlisted the aid of 20,000 students and a battery of computers in an attempt to determine what kind of housing students want at the University of Wisconsin. The answer: variety. The fact that both the Wisconsin study and the Penn State study resulted in similar findings indicates that students emphatically want a freedom of choice.

Some students want the residence hall to be a relaxing social haven which will provide distraction from the rigors of academic life; others want to be immersed in stimulating cultural or intellectual activities. Each is expressing a deep-felt need. Some students want to live in close proximity to only a few of their peers; others want a large and fluctuating social milieu from which to choose. Some want to live near faculty and families with children, others want to live in a world apart. Certainly age influences the kind of living arrangements that a student wants, but the growing trend toward interrupted education and more graduate education makes the age of the college population quite difficult to predict.

Every study of student opinion conducted in recent years points to the fact that students want to play a larger role in shaping and managing their college lives. A majority of students—particularly upperclassmen—do not want to be taken care of; "caretaker dorms" are viewed as impediments to autonomy and freedom. Students want to live in situations that they can control and change. Environments that impede this are seen as authoritarian. As such, they inspire apathy, rebellion or rejection.

Coeducational Living

If there is one thought to be gleaned from the many

studies of student opinion, it is that college students view themselves as men and women—not as teenagers or boys and girls. This fact alone has made the trend toward coeducational living irreversible. The subject of coed living may purse the lips of Puritans, but it is not the Sodom they may envisage. Coed dorms place men and women on alternate floors or on the same floor, and in some residences they share bathrooms. A further development, cohabitation, places men and women in closer proximity than coed dorms, but in 1972 few colleges acknowledged its existence.

A Gallup poll in 1971 indicated that even parents—a surprising 46%—are not opposed to having their daughters live in coed dorms. It would seem that parents—like college administrators—have come to accept the fact that the old system of protecting student morality cannot be enforced and is gross hypocrisy. Students will assert their independence whether allowed to or not.

At schools where coed living has been tried, evidence points to a mature atmosphere, less noise, more intellectual discussions, happier students and fewer empty rooms. That coed living has succeeded can be amply demonstrated. At Georgetown University, students who objected to the men-only restriction in the dorms were moving to nearby rooming houses in order to entertain whom and when they pleased. When Georgetown permitted women visitors in the dorms and relaxed curfews, some of the first to move off campus were the first to move back. At Princeton University the admission of 178 women to the 3,000-man campus in the fall of 1969 has helped to increase the number and quality of male applicants for 1973.

Most major universities now have some residences that are coeducational. At some schools, the university administration decides the extent of coed living allowed; at other schools (George Washington University is one), the students themselves devise the guidelines. Some colleges allow the members of each dormitory to vote on a plan of their own choosing. Whether by floor, by corridor, by suite or by room, men and women are living closer together than ever before. None of the "dire consequences" that many administrators feared have as yet materialized.

Although the Pill and the waning influence of organized religion have succeeded in abolishing hell and pregnancy as deterrents to premarital sex, students appear not to be compulsive about it. A sage sophomore at Wilmington College, in Ohio, philosophizes, "When you're given a lot of freedom, you generally don't take it all." Dr. Martha Verda, counseling psychologist at Oberlin College, feels that liberalized visiting regulations have opened up new opportunities for students to know each other as human beings. "As community spirit grows," says Dr. Verda, "students don't have to pair off as lovers to get to know one another. They form sister-brother relationships and take on large groups of friends."

Stanford University, San Francisco State, the University of Michigan and City University of New York are some of the colleges which offer rooms in dormitories to men and women on the same floors. One fraternity at Stanford, Lambda Nu, has gone coed with both men and women reporting that "coed living is a natural experience and promotes real understanding between the sexes rather than the false impressions that dating can create."

Some schools have found it beneficial to increase their counselor services as a result of the trend toward more serious male-female relationships. Hiring graduate students as counselors and putting their offices in the dorms makes help readily available, since admittedly the new togetherness creates new pressures for some students.

It would be a mistake to assume that turning a traditional dorm into a coed residence solves the problems created by an outmoded building. Just the opposite: making the standard dorm coed can create as many problems as it solves, since double rooms which offer no visual (to say nothing of auditory) privacy, huge common rooms, cavernous dining rooms which offer no social intimacy and gang bathrooms are even less acceptable in a coed situation than they were before.

What's Become of the Dining Hall?

At present, most students resent and reject any activity that requires them to congregate in large groups at specified times. Since freedom and intimacy are prized and the mass camaraderie of a previous era is viewed with disdain, huge dining halls where meals are served promptly at 8:00, 12:00 and 6:00 are standing empty and silent at campuses from Maine to California. About 96% of those questioned in the Penn State study of student opinion said they would gladly pay extra for the privilege of eating at a snack bar, and an overwhelming number of off-campus dwellers gave compulsory board contracts as one of the primary reasons for their move.

What students want is a flexible food plan that offers them a variety of options from which to choose. And they want to be able to eat at any hour of the day or night. The mini-refrigerators for rent on many campuses and small electric stoves facilitate 24-hour snacking where kitchenettes are not available.

As a result of student pressure, many schools are offering limited board options – that is, the choice of a contract for 10 or 15 meals per week in place of full board. Kent State University, which offers 0, 15 or 19 meals a week, is closing some dining halls and extending meal hours at others; lunch, for instance, is served from 10:00 until 4:00. Kent State's continuous feeding program (6:45 A.M. to 6:00 P.M.) has reduced the employee payroll by 12%, saving $750 per day.

Still other schools are converting dining halls into movie theatres or seminar rooms and offering "room only" contracts. At some institutions dining

halls have been turned into short-order cafes open late into the night. At one midwestern university, a dining hall becomes a bake shop one day a week, selling doughnuts, cakes and cookies. At Wisconsin State University (River Falls), one dormitory basement has been converted into a full kitchen where unlimited cooking is allowed. Students report that such group kitchens are a unifying center of social activity in dorms that otherwise are impersonal.

For many students, the ideal situation would be a small kitchen for every six or eight people. Gerald Brock, director of housing at Western Washington State College, puts it this way: "Eventually we will have to phase out traditional dorms altogether. We will make all existing facilities into apartment-type units with perhaps one or two residence halls for freshmen." At Western Washington, the dormitories are 25% empty, but the mobile homes and two-bedroom apartment units on campus are filled to capacity. Asked for an explanation, Brock says, "Students today want a total absence of supervision—only apartments give them that." The wisdom of Brock's observation is borne out on other campuses.

At the State University of New York at New Paltz, students lived in suites which did not have kitchens and food contracts were compulsory. When students began to move off campus into apartments, food contracts were made optional. Now the suites are filling up, but because only 900 of the 2,600 residents subscribe to the food service, two dining halls have been closed. However, since the suites contain no cooking facilities, students are improvising with all manner of electric hotplates, frying pans and griddles. Electric circuits are overloaded and with only bathroom sinks for food preparation and washing, sanitation is at a low ebb. The college plans to install self-contained kitchen units as soon as possible.

Because dining halls are the most financially unrewarding part of the traditional dormitory, administrators continually search for new alternatives. Some schools are talking about leasing their dining halls to outside restaurants. The University of Wisconsin's *Student Housing* offers this intriguing solution: "To what degree is the quality of food a function of the complex labor rules and costs within which a state institution must operate? Would it help to lower costs and increase skill level of the labor pool to offer a hotel and food management school in Madison, using residence hall kitchens for internships?"

Many private colleges have no intention of offering optional board plans, despite student dissatisfaction. They insist that their cherished communal spirit depends in large measure on the fact that students eat together. Harvard, for instance, has changed nothing but its menu, which now offers basic "health" foods (whole-grain bread, yogurt, cottage cheese, wheat germ, hard-boiled eggs) along with the traditional fare.

Hampshire College, which opened in 1970,

may be the only school in the country where students rave about the food. All meals are served cafeteria style; there is a variety of choice and ample opportunity to make the concoction of your choice, so that students feel they are making their own meals without having to bother about marketing or cooking. The college claims that offering choices actually saves money, since there is less waste. Meals are served for two-hour periods; for snacking there are kitchenettes on every floor. Huge freezers stocked with ice cream are open at meal times, cones are available, and there is no limit on how much ice cream (or any other food) you can eat.

Off-Campus Blues

All across the country, students who have moved off campus into inner-city apartments report that they have succeeded only in exchanging one unsatisfactory situation for another. They complain about the time and cost of transportation, a feeling of isolation ("we're not part of the city or the campus"), legal difficulties with landlords, twelve-month rents for nine months of occupancy, run-down buildings, crime, roommates who default on the rent and, of course, high rents (rent strikes have occurred in some cities). A recent University of Michigan survey indicates that rents in Ann Arbor are three to four times higher than rents in Detroit for comparable apartments. Off-campus students complain, too, about police raids. Said one senior, "In the dorm at least I can smoke pot and not worry about getting busted."

If present economic trends continue, students may be forced to live on campus whether they want to or not. Although many school administrators privately profess a desire to "get out of the hotel business," it is doubtful whether they can realize their wish, since private developers no longer view the student market with eager optimism; officials at the U.S. Department of Housing and Urban Development report that some private builders are getting out of the dorm business as quickly as they got in, because commercial building and non-college housing are more profitable.

The Uncertain Future

Despite the back-to-campus trend at some schools, a few institutions have decided to curtail all future building plans. Wary of investing any more capital in dormitories that students may find unacceptable, the 27-campus State University of New York canceled plans for $400 million of residence hall construction. Reasons for the decision were not only student preference for off-campus living, but also rising construction and maintenance costs and a state fiscal crisis. Northern Illinois University and the University of Massachusetts have also curtailed future building plans; other schools are discussing similar action.

Schools where enrollment is increasing or at least stable may stave off disaster by abandoning

plans for additional dormitories. But more drastic measures are needed at schools that optimistically expanded during the post-war college boom and now are suffering a sharp drop in enrollment. At Seattle University, for instance, the rising cost of private education plus the trend to off-campus living has emptied several dorms. By closing one dorm, converting another into faculty offices and changing the largest hall to a coeducational residence, the university will avert financial disaster.

The University of Oklahoma also suffered the pangs of over-building, and as a result a twelve-story dormitory stood empty. When the Post Office Department offered to lease seven of the twelve floors for a training facility, the university accepted. The Post Office is paying for the renovation and will pay for reconverting the facility into living quarters whenever its lease is not renewed. The administration has stated its preference for conversion to apartments when the time comes.

Some schools have responded to the off-campus trend and a drop in enrollment by requiring students to live in dormitories as a condition of enrollment. Confident that the courts would find compulsory on-campus living unconstitutional, student groups were initially unconcerned about this infringement of their right to choose. Alarm replaced apathy, however, in 1971, when the U.S. Supreme Court (in *Pratz* v. *Louisiana Polytechnic Institute*) affirmed the decision of a lower Louisiana court, which held that a rule requiring students to live in dormitories was constitutional. In this landmark case, the defendants contended that dormitory living adds "an important enrichment to college and university life and as a living and learning concept is important and integral to the interpretation of higher education." The *College Law Bulletin* of the National Student Association contends that "what remains to be seen is whether required dormitory living will be upheld where the issue at trial is the existence, in fact, of an 'educational experience' in the dormitories." In *Pratz* v. *Louisiana Polytechnic Institute*, the Court granted schools the right to require on-campus living for educational reasons, but not for financial reasons. Yet some schools (Wisconsin State University is one) are raising a new constitutional issue by honestly admitting that their residence requirement is a direct response to a budget deficit. The University of Iowa, which had 1,000 empty rooms and a $4 million deficit in 1970, is mustering both arguments: students are required to live in residence halls 1) because of the "additional enrichment afforded" and 2) "to insure the integrity of revenue bonds." Although Louisiana Polytech emphatically denies that their residence requirement is simply a response to financial straits, many students remain unconvinced.

There can be no doubt that requiring students to live in dormitories fosters bitterness. At the University of Iowa, the Associated Residence Halls issued this statement: "To institute required living in residence halls will be viewed by students as a puni-

tive measure, done only with the interest of the financial bondholders in mind. If the residence halls are given an image by the regents as being so undesirable to live in that students must be forced to live in them, the halls will, indeed be in much more trouble than they apparently are now."

Students complain that being compelled to live in dorms is as archaic as being compelled to attend class; it gives college the atmosphere of a prison. Feeling they are being made to suffer for administrators' mistakes (i.e., over-building), students resent being deprived of their freedom of choice, no matter how noble the explanation offered by the college.

Students are not alone in their conviction that forced on-campus living is a grave mistake. In the opinion of Donald R. Moore, former president of the National Association of College and University Residence Halls (and in 1972 director of housing at Tulane University), "All you're doing is solving one problem and creating another. You can make people live in dorms, but you can't make them like it. The discontent will create disciplinary problems and the malcontents can be counted on to do expensive damage to the buildings they don't want to live in." Moore believes strongly that it is his job to create dorms that students will *want* to live in.

Freedom from Paternalism

Whether or not the Supreme Court's decision is legally correct seems almost beside the point; it may be good law, but it is bad human relations, since it attempts to oppose the ineluctable expansion of student freedom and responsibility. Despite the Supreme Court decision in *Pratz* v. *Louisiana Polytechnic Institute*, a majority of schools are abolishing rules and regulations. The American Civil Liberties Union, which questioned 155 college presidents in 1970, reports a "steady extension" of students' civil liberties and a corresponding decline in the practice of *in loco parentis*.

The ACLU survey indicates that student power is increasing in three significant ways:

1) Students are playing a larger role in college government;

2) Their constitutional rights are treated with greater solicitude;

3) They are freer to arrange their personal lives without university interference.

In reply to ACLU questions pertaining to student participation in college government, 49% of the presidents said that students were voting members of committees that establish course requirements, and 24% said students participated without voting rights. Also, 59% reported student voting privileges in curriculum offerings, and 25% reported participation without voting rights. In the area of personal rights, 71% reported that students have "primary responsibility" for their personal lives, including dormitory living.

Another survey, conducted by *College Management* magazine, reinforces these findings. Five

hundred university deans were asked a series of questions relating to student self-government. The opinions expressed were reaffirmed in a follow-up study reported 12 months later, in the August 1970 issue. The deans stated that:

1) Students should be voting members of the college committees governing areas other than extra-curricular and social life.

2) Student participation in college governance is now too low.

3) Administrators encourage—and the faculty discourages—student participation in university governance.

4) Student participation in university governance is growing, is desirable and will get stronger in the next few years.

Student Activists

It is no longer exceptional for students to play active—not just perfunctory—roles as members of boards of regents, academic and dormitory councils, presidential search committees and curriculum committees. Those students who only a few years ago were storming the barricades in hopes of changing the world are now working quietly and effectively "within the system" to change the university.

If student enterprise is to thrive, it needs to be encouraged and nurtured by the university; when such encouragement has been forthcoming, the results have been heartening. Student-run book stores, furniture exchanges, cooperative housing, food cooperatives, legal services, social and psychological counseling centers, health clinics, lecture and film series, day care centers, vegetarian kitchens, radio and television stations abound on some campuses. Many of these activities are housed in former (unused) dormitory living rooms and study rooms. When these activities are housed in the residence halls, the dorm acquires a new vitality; learning is not something that happens only in the classroom but can become part of dormitory life, too. Since many of these student-run projects express concern for and offer services to townspeople, students are able to become involved in the "real" concerns of the city without moving off campus.

Buildings are not immutable; they just look that way. With wit, courage, imagination and not too much money, a huge brick and glass cenotaph can be transformed into a humane living place—a home. Where dormitories have been remodeled so that there is a rapport between the physical structure of the building and the life-style of the students who live inside, empty rooms are suddenly no longer empty. And there are other bonuses as well: seniors are eager to move back on campus, and the wanton destruction of university property becomes as extinct as last year's slang.

If the transformation of a dormitory is to be really successful, much more than just the structure of the building must be transformed. Changes must take place in the thoughts and minds of university administrators, so that a dormitory which once was only a collection of rooms in which 400 people lived can become a community of people who live together and care about each other. In a leaflet describing its residence halls, the dean of housing at Oberlin College says, "A group living together can become a community where individuals develop their intellectual as well as social, interpersonal skills; where their guiding values mature and where they become more knowledgeable about themselves because of their associations with one another and as a result of the activities of the house."

The College Housing Branch of the U.S. Department of Housing and Urban Development (HUD) sees the remodeling of existing dormitories as the big challenge for the next decade. Because there has been a great deal of talk about renovation but very little action, the department suggests colleges should make renovations extensive enough to create significant changes in living patterns but suggests they not be so extensive that the bonded indebtedness becomes unwieldy.

Most dormitories carry an existing debt of $2,000 to $5,000 per student. According to HUD, it is economically safe for a university to increase this indebtedness to between $7,000 and $8,000 to finance renovations if necessary. Although there are no studies that "prove" that renovation "pays off" in increased rent revenues, HUD feels certain that there is considerable non-numerical evidence indicating that renovation of unpopular dormitories is a worthwhile investment—from both a financial and educational standpoint.

A university that embarks on a program of dormitory renovation should not make the mistake of renovating all buildings in the same manner. When more than one structure is rehabilitated, there is an opportunity to create a choice, not only in life style, but in price. One dorm might offer luxury apartments (with private phones, maid and linen service); another, a Spartan existence at a bargain price; and still another, a student-run cooperative. What follows is a random sampling of some of the successful renovations—both to the buildings themselves and the ways they are used—that have been tried at campuses around the country.

Massachusetts Institute of Technology

The East Campus Dorm at MIT was "not a happy place to live," according to Lawrence Bishoff, assistant to the vice-president of operations. Students invariably rated it the least desirable place on campus because of its dark 300-ft-long corridors lined with cell-like rooms. "It looked like a barracks; the dorm offered no attractive place for a student to meet friends," Bishoff says. Since East Dorm was not scheduled for complete remodeling until 1978, housing officials decided to do something quickly and expediently to make the building habitable, rather than say, helplessly, "Our hands are tied."

MIT officials responded to the students' need to participate in structuring their environment by allowing the students themselves, rather than housing officials or architects, to design the renovations. The architect in charge of the project, Harry Ellenzweig, was wholly in sympathy with MIT's decision. "When I remodel a dormitory, I insist on working with the tenants; otherwise, I know the project will fail. Architects can't pretend to be students." Capitalizing on the cry for "participatory democracy", Ellenzweig had each floor elect a delegate; together they formed a "client team" which consulted regularly with him and officials from the housing office. "It was a democratic process. The taste of the clients prevailed—unless they chose something that was a great waste of money. Good design is not the whole answer," Ellenzweig explains. Every change decided upon by the client team was discussed and approved by the dormitory as a whole.

New lighting fixtures to brighten the hallways and make the ceilings appear lower were the first changes; next, floors were carpeted and the stairwells painted in stripes of bright primary colors. Since student ingenuity had already worked miracles in giving the essentially monotonous bedrooms enormous flair, character and individuality, it was decided to concentrate resources on changing those parts of the building which no individual could alter. On each floor, one double room was turned into a small lounge suitable for 20 to 25 students. The wall separating the former bedroom from the corridor was removed. With the addition of soft lighting, comfortable furniture and a blackboard, these lounges have become popular meeting places. The fixtures and furniture were all selected by the students; none of it has the "hospital waiting room look" so often found in college dorms.

Bishoff is enthusiastic about the results. East Dorm has changed more than just its appearance. "The impact on the community was beyond our expectations and somewhat extraordinary. Small and large group activity seemed to climb, the house's desirability as indicated by freshmen living preferences increased from last to first on campus, and several old customs which some felt undesirable—such as 'destruction day'—disappeared." Reports indicate that for the first time there is a close working relationship between faculty and students in East Dorm. (One outgrowth of this rapport has been a

successful student-sponsored seminar series.) Bishoff attributes this new sense of commitment to the client team, which forced students to care about their dormitory. "People kept asking me why I was spending money on corridors; I think it was well worth it," he says. The price (in 1969): $400,000, or $500 per student.

Pleased with the transformation of East Campus Dorm, MIT officials decided to apply the same principle to Burton-Conner House, a badly overcroweded dorm housing 500 students, which Bishoff called "our local slum." Since Burton-Conner was built in 1925 as an apartment hotel and converted to a dormitory in 1950, it was largely capital-free. The proposed changes, then, could be quite extensive without incurring an enormous debt.

Before opting to rehabilitate the facility, studies were made to determine whether it wouldn't be more economical to tear the building down and start anew. But the study found that, because the basic structure was still sound, costs could be cut by 50% if the outer shell as well as the corridor, stairwell and elevator pattern were left intact. Nothing else, however, was salvaged. In Bishoff's words, "we tore the guts out of it." The cost was $3.5 million (about $10,000 per student, since occupancy was reduced to 350 students).

Architects drew up a preliminary plan for an apartment dormitory complete with private kitchens and bathrooms, since students at MIT, like students all over the country, prefer apartment living to every other arrangement. The preliminary plans, however, were worked over and changed by the client team of students that met once every three weeks with architects and housing officials. The students argued against making all the apartments alike; their preference resulted in a melange of apartments which can house a range of three to nine occupants. Student opinion is reflected, too, in the ratio of single rooms to doubles; two-thirds of the bedrooms are singles, one-third are doubles. The client team had a significant impact in encouraging the architect to create a structure that accommodates a variety of tastes and life-styles.

Next door to Burton-Conner is a totally new apartment dorm. A cool, rational symmetry pervades this building which, though offering all manner of creature comforts, does not have the lively architectural vitality of Burton-Conner. Having to conform to the basic constraints of the existing building created a bewildering diversity of spaces in the older dorm which gives it a kind of charm that the new dorm lacks. For this reason, renovating an old structure can have decided advantages which are not always apparent when one is deciding whether to renovate or raze.

University of Kansas

McCollum Hall at the University of Kansas is another "institutional" dorm that does not suffer a vacancy problem. A high-rise, three-wing building, McCollum houses 1,000 students in double rooms

along double-loaded corridors. Despite its magnitude and monotony, students contend that McCollum is a congenial place to live. Again, it is the public rooms that tell the story. The large lounge just escapes looking formidable. A piano and intimate seating groups are partially responsible. Helpful, too, are soft chairs and couches strewn with magazines (the absence of maids is an asset, since students find the disarray "warm and inviting"). Beyond the entryway stands a bank of vending machines which, if not elegant, are certainly practical; small tables and a TV are nearby, so that snacking, card playing and watching TV can go on all night.

McCollum's ground floor library is glass-enclosed so those inside can see out, those outside can see in. Filled with splendid books and a wide range of magazines (everything from *Playboy* to *Commentary*), the library's collection is purchased with vending machine profits. The same profits also help pay for the records and hi-fi equipment in the music room. The dining room can be adapted to a variety of purposes—private dinner parties, small meetings, a poolroom—by rearranging the movable panels. Several years ago, maid and janitor service was curtailed; with the money that was saved, McCollum's corridors were carpeted and private telephones installed.

The East Campus Dorm at MIT and McCollum Hall have more in common than their revitalized common rooms; both are coeducational, and both allow students to paint and decorate their own rooms. The student opinion study sponsored by EFL indicates that where students are permitted to use paint, silver foil, colored lights, supergraphics and sculpture made from "found objects" (styrofoam cups, tin cans, engine parts), they are able to impose a personal identity, to create a private lair within the confines of an institutional building. At MIT, students paint the corridors as well as their rooms; at Western Washington State student murals vibrate in the lounges. In this way, students feel they have "control over their environment." "Control" is a key word in the student lexicon; understanding its importance is a requisite for understanding student discontent. Paint and a brush can enable a student to make at least one small part of a university into his own private turf.

Students at Kansas University, like students everywhere, equate built-in furniture with built-in frustration. Not only do they want to choose the colors of their walls, they also want to choose their furniture and move it about at will. The Penn State study also indicates that students turn thumbs down on immobile furnishings. In fact, administrators are the only ones who have any kind words for built-in furniture, for the simple reason that it is a financial boon. Since it can be constructed as an integral part of the building, it can be financed at the original cost of the low-interest government loan. But these same officials are learning that if students resent built-in furniture, they will express their resentment by damaging it; it is cheaper—and

wiser—in the long run, then, to provide movable beds, chairs and desks. Because built-in furniture is difficult (and costly) to uproot, its marred and unpleasant remains are often visible long after they should have been replaced.

At Kansas, housing officials try to include as many "outside" freedoms as possible in dorm life. Since painting walls and moving furniture at will are two of the choices available off campus, it is felt they should be available on campus as well.

Mankato State College

At Mankato State College, in Minnesota, where only freshmen are required to live on campus, empty dormitory rooms were the inspiration for an ingenious idea. Since students wanted bedroom–living room suites rather than double rooms, a plan was devised for putting doors between three adjoining doubles and closing off all but one doorway to the corridor. Cost estimates were no higher than they would have been had the old-style rooms merely been extensively remodeled.

Two floors of Searing Center, a 20-year-old residence hall were chosen for the experiment. In addition to the new doorways, soundproofing was installed between the rooms, and walls were paneled to further muffle noise. The cost of putting in private bathrooms was prohibitive, so the gang baths remain. However, having gained a great deal more privacy and spaciousness than they had before, students are delighted with the new arrangement.

The suites and corridors are carpeted, but the college supplies only a minimum of furniture, beds and storage units. The suites allow the students to arrange their space in many ways; three can sleep in one room, giving the fourth person a single, or, to reduce occupancy cost, six can live in the suite. Tenants may paint the apartments in colors of their own choosing with university-supplied paint. By adding doorways and soundproofing, Mankato State has given students what they want: flexibility to arrange their life-style in a variety of ways.

University of Massachusetts

The Southwest Residential College at the Amherst campus of the University of Massachusetts was, in the words of a former student, "a rotten place to live." The sixteen dorms (eleven are five stories high, five are twenty-two stories high) are built with serrated rows of double rooms along straight corridors. Finding the atmosphere cold and institutional, students were moving into their own apartments in town. As more students moved out of the dorm, the atmosphere deteriorated and the budget deficit grew. In 1970 the university decided to take drastic measures. With a grant from EFL to provide consultant assistance, housing officials began to look for ways to renovate the 5,400-student complex. Their goal was to change not only the physical plant but also the attitude of students and their behavior toward their dormitory.

Not surprisingly, funds were limited. Instead

of taking money from general university funds, it was decided to return a small part of the rent money paid by each student to the dormitory to implement changes; in this way students would feel that their money was being used to improve their dormitory. Each year, the equivalent of rent fees from 200 students will be spent on the renovation program, which is a continuing process.

Student contribution to the changes is not limited to money. Each corridor of students is free to decide on the kind of renovations they want to make. Once the student-proposed changes have been approved by the proper committees, the students themselves assist the union laborers with the actual construction work.

On many floors, students have helped to remove walls between double rooms to make suites. On three floors, the wall between a double room and a central lounge has been removed, making an area large enough for a snack bar. With hot plates and other cooking equipment, students can prepare their own snacks and light meals. These kitchenettes are student-manned and managed; health and safety regulations are strictly enforced. For more serious eating, a dining commons is also available on an optional basis.

By embarking on only a few changes at a time, the college has been able to demonstrate to the bondholders that they are not damaging the plant or reducing potential revenue. All the changes can be reversed, if necessary.

John Hunt, master of Southwest Residential College, reports that student enthusiasm is high. "For the first time, they are beginning to react to the environment, to think about it, to care about it. Our basic philosophy," Hunt explains, "is to give as much responsibility to the students as possible." The students are free to decide whether their living unit will be coed or not; they are free to paint murals or bright primary colors on walls and doors in lounges and corridors. In their own rooms, they have total latitude, even to the extent of making changes which involve plastering and rewiring. In one dorm, students elected to turn a large lounge into a gymnasium; in another, the lounge is being divided into small study rooms.

Student responsibility extends beyond the physical plant to the actual administration of the dorms. In some units of the residential complex, the money that is usually allocated to pay the salaries of eight professional dormitory staff members is paid, instead, to student staff members who perform the same functions.

For many years, the large lounges in the Southwest residence halls have been used as classrooms for 200 sections of courses in the regular curriculum. Now 65 colloquia—short concentrated courses suggested and designed by students—are also given in the residence halls, adding another kind of vitality to the environment.

All of this activity has drastically improved the atmosphere in the dorm, but, ironically, the greater

latitude has given rise to increased aspirations for more student control over academic life. Hunt is not alarmed by this contentiousness. "I feel it's healthy," he says, "It shows they care; before, they were silent but sullen."

The American University

When The American University in Washington, D.C., ran out of money several years ago and was unable to finish the top floor of one of the school's newer dormitories, no one guessed that the misfortune was a blessing in disguise. Anderson Hall is in every respect a conventional high-rise dorm; realizing that students were no longer happy living in double rooms lining straight corridors, the university decided to find out how students did want to live before completing the top floor. With a grant from EEL, the university hired a design consultant to survey student needs and attitudes and to devise an interior that would—as nearly as possible—conform to these needs. "As nearly as possible" is an important phrase, because, of course, the building itself imposed severe constraints on what could be done. Since plumbing (necessitating gang bathrooms) and electrical outlets were already in the building shell, they could not be changed. Permanent, too, were the fixed building supports on the floor. Faced with these limitations, Erma Striner, the design consultant, sent out a questionnaire to the entire student body.

From the questionnaires, as well as from subsequent personal interviews, she learned that, ideally, students want apartments. Since private bathrooms and kitchens were out of the question, she designed instead clusters of living room–bedroom suites in a variety of sizes. Because students said they wanted privacy, but also a "sense of community" with a small—but not too small—group of their peers, each cluster is designed for about 50 occupants. Thus, the three clusters on the coeducational floor will house 148 students as well as 2 staff members.

Since the questionnaires revealed, too, that students want to cook their own meals, the suites are grouped around lounge areas, which provide cooking facilities as well as a quiet zone for study. Some of the original corridor space has been incorporated into suites so that now the rooms are no longer lined up in straight rows.

Suites vary in size and shape, and their individuality will be further enhanced by a variety of kinds of furniture from which to choose. Students asked that all furniture be movable—even closets which can serve as room dividers. Bunk, studio and trundle beds will be available, in addition to several kinds of chairs, tables and lamps. In this way the components can be mixed differently in every suite.

Oberlin College

"There is an assumption which should be questioned—that students merely sleep in their rooms. They do more; they live in their rooms." This as-

sertion, by the Research and Design Institute of Providence, R.I., in the 1971 *Brown University Student Housing Report*, meets with approval at several colleges.

Oberlin College found that when it converted single-sex dorms to coeducational living, creating a social space, a "neutral territory" much like the living room in a home, was essential. In Barrows Hall, a traditional dormitory built in the 1950's, four double rooms were taken out of circulation in the center of each corridor and converted into four areas suitable for studying, lounging, cooking, listening to music, talking, meeting a friend, putting up an overnight guest, holding a seminar or an impromptu party or an art exhibit, or as a place of refuge from one's roommate. Since all coed dorms at Oberlin have non-student adults in residence, additional space on the ground floor was converted into apartments. Students especially enjoy having children living in the same building with them. "Having kids around makes college seem more like the real world," one senior explained.

Although Oberlin's renovation scheme resulted in the loss of a significant number of sleeping spaces, the college is not experiencing a shortage of rooms; fortunately the renovation coincided with the off-campus living trend. However, housing authorities believe that the conversion to coed living has stemmed the off-campus tide, and indications are that a greater proportion of seniors are electing to stay in the residence halls. Although the requests for single rooms far outnumber those available, students report that the new lounges offer some degree of privacy even for those who must live two-to-a-room.

Alternate-door coeducational living is being tried at Oberlin as a limited experiment. Interestingly, not a large number of students chose this plan; far more requested alternate-floor coed living. Having men and women on separate floors simplifies bathroom use (in dorms with gang baths), and it also offers another—unexpected—benefit. At Antioch College, in Yellow Springs, Ohio, women report feeling "safer" if men occupy the ground floor; turning the first floor over to men has reduced the number of thefts and intruders at Antioch.

Florida State University

Students who lived in Smith Hall at Florida State University, in Tallahassee, made no secret of what they thought of their dormitory. They sent delegations and petitions to the president of the university, held rallies in the dorm to proclaim their feeling that they were living in a prison, not a dorm. Feelings of frustration were also expressed in willful destruction to the building. Realizing that the dorm had to be drastically renovated or torn down, the university opted for the former, since the building, completed in 1952, was basically sound.

Typical of its era, Smith is a ten-story building which has small double rooms lining long corridors. With a $3,350,000 loan from HUD, Smith will create

apartments by converting two double bedrooms into living and dining rooms with compact kitchens, and adding bathrooms and single bedrooms in modular units that will be attached to the outside of the original structure.

Bowie State College

"There is only one word to describe old Tubman Hall—it was a dungeon." William Mumby, assistant to the president of Bowie State College, believes that the deplorable conditions in the women's dormitory were a major factor in the riot staged by 600 students at the Maryland college in 1968. The protest, which closed the school temporarily, was quelled with the help of state troopers, but not before the students won a promise for improvements in Tubman Hall.

Tubman Hall was 50 years old at the time of the demonstration. According to Anthony Johns, Jr., the architect who drew up the renovation plans, "the conditions in the old building were inhuman; they never would have been tolerated at a white college." Johns reports that the number of bathrooms was insufficient and those that existed afforded no privacy; a faulty heating system made some rooms freezing, others unbearably hot; there were huge cracks in the dingy plaster and bedrooms were small and over-crowded.

Johns, who teaches at Howard University, credits the state authorities with forthright determination to improve Tubman Hall. After he prepared plans for renovating the building, the necessary $535,000 was quickly appropriated. The Board of Trustees of Maryland's state colleges and Bowie State officials jointly approved the plans. The Board financed the dormitory through a state bond issue, so the college bears no financial responsibility for the renovation.

The original dormitory was gutted; only the roof, the bearing walls and the stairwell were left intact. The double-loaded corridors were replaced with living clusters. Each group of eight double rooms has its own entry off the central stairs, a bathroom, a study room which is wired for closed circuit television, and a living room. The small living groups foster closeness, yet they are not isolated from the dorm as a whole.

Tubman Hall boasts a beauty parlor and a recreation room for dances and social gatherings. Bowie officials report that the students are thrilled with the new residence, despite the fact that rising building costs made it necessary to dispense with airconditioning and a P.A. system. Johns feels, however, that the enthusiastic student reaction is more a reflection of the generally inadequate dormitories at black colleges than it is an accurate reflection of the building's merits.

Michigan State University

Large schools need to create a greater variety of living choices than do small schools, since they attract a greater variety of students. Even though most stu-

dents seem to want apartments, some—especially freshmen—are unprepared for total independence; for this reason it would be a mistake to convert all traditional dorms into suites. Fee Hall at Michigan State, in East Lansing, was converted to apartments, and its once-empty rooms are all occupied, but Williams Hall was merely given a face-lift. Rooms were refurnished, corridors and student rooms were carpeted, refrigerators were installed and small doubles were converted to singles. The previous 10% vacancy immediately reversed to total occupancy with a waiting list.

Georgetown University

Georgetown University, in Washington, D.C., thought of itself as a nonresidential college until the mid-sixties when the changing character of the city and the student body forced a reassessment. Rather than build new dormitories, the university turned over 22 town houses—previously rented out as income property to non-college tenants—to students. The town houses are small; no more than five students live in each. They live totally without supervision or curfews and a board plan is optional.

A housing official who visits the town houses twice a month reports that the students are happy, the houses are clean and (most important) none of the predicted clashes between students and the surrounding neighbors have materialized. Housing officials were concerned, however, that town house residents were not eating properly. To remedy this they produced an "easy, economical, gourmet" cookbook; the first edition is completely sold out and a second edition is planned. Georgetown owns 32 other town houses which will gradually be turned over to students; in one year there have been 600 requests for the 100 available town house spaces.

Another inner-city school, the University of Chicago, has bought decaying brownstones and boarding houses near the campus and transformed them into apartment dormitories where students and faculty can live together. By renovating tenements near the campus, the university has not only saved money, it has also saved the neighborhood. Other schools—New York University and George Washington University—have bought old hotels near the campus and are using them as dorms.

Living-learning residences

At many colleges and universities, unused, underused or unloved dorms are being turned into centers of academic and cultural ferment. The idea is to offer students more for their money than just room and board: clearly it's an idea whose time has come again.

The old fraternity houses brought together like-minded people who shared common views and values. Living-learning residences serve somewhat the same function, and, in addition, they creatively link academic life with leisure time. Instead of merely being a place to eat and sleep, the dorm becomes a haven for pursuing serious or creative interests free from the structured format of the classroom. Such dorms typically seethe with stimulating activity: earnest discussion takes the place of small talk; string quartets and film festivals, the place of poker. Serious students with left-over energy to burn and enthusiasm to explore find a welcome niche in this kind of dorm; the frivolous student need not apply.

Housing officials are beginning to realize that living-learning dorms and other special interest residences, such as black dorms and foreign language dorms, tend to distract from the inadequacies of the physical plant. To put it another way, students are willing to tolerate more architectural inadequacies if the dorm offers them other compensations. Transforming a traditional dorm into a living-learning dorm may involve fewer changes in the actual blueprint of the building, but many more changes in the ways the building is used. This kind of renovation demands as much—if not more—effort on the part of housing officials as do structural renovations, but is effort spent in a different direction.

The living-learning dorms described below are housed in residence halls that had lost favor with students and were badly in need of some kind of rejuvenation.

University of Denver

The situation at Denver's Johnson McFarlane Hall was not unusual: students expressed their dislike of the large and unimaginatively designed dorm by moving out. Denver's solution to this typical dilemma, however, is not usual: it is imaginative, almost daring. Best of all, it is succeeding.

Since 1968, when on-campus living became optional (rather than required), the number of empty beds in Denver's dormitories had increased steadily. In 1971, however, the trend seemed to reverse. University officials attribute the change to increased rents off campus, more liberal parietal rules on campus and two new living-learning dormitories.

Johnson McFarlane's "special interest" is empirical science. Although the atmosphere in the dorm has improved drastically, none of the living quarters has been remodeled: double rooms still line double-loaded corridors. What has changed are the common rooms, which are now filled with electronic equipment, much of it borrowed from other

campus departments. A computer terminal, keypunch electronic calculators, photography and videotape equipment are an important part of daily life at Johnson McFarlane, which has ceased to be "just a place to sleep" and has become, instead, a resource center.

To help each other use the electronic equipment, students living in the dorm give noncredit courses in computer programming. Consequently, the computer is in use 12 hours a day. In addition, a series of atypical seminars is taught in the dorm. Students do not passively listen to an "authority figure"; they participate by lecturing, discussing and demonstrating theories of their own. Using such methods as game theory and simulation, students put their computer—and their knowledge to work.

Sharing the computer, as well as a common sphere of interest, has given rise to a new closeness in the dorm. The bull session has been reborn, students help and care about each other. An unexpected dividend (but one which the administration hopes will grow) is the increase in the number of upperclassmen in the dorm.

Having created a dorm for the empirical scientists, Denver turned its attention to the artistically inclined. "We are expanding the living-learning programs," Walter B. Shaw, dean of housing programs, explains, "because we are convinced that learning in the residence halls can enhance learning in the classrooms. Learning should not end when classes are over." In addition to the advantages of 24-hour learning, Shaw believes that special interest dorms allow students to plan and shape their own education so learning becomes a participatory process.

Centennial Towers was chosen as the new arts dormitory, largely because it was the least popular dormitory on campus. With a grant from EFL, a dorm was planned focusing on the "symbolic disciplines"—art, music, theatre, communications and the humanities. Three resource centers provide a small theatre, a darkroom, motion picture equipment, a videotape system, a four-channel sound system, a closed-circuit radio station, dance and painting studios, and a library of 2,000 books. Noncredit learning experiences are made available in the dorm by graduate students who are given a tuition waiver and a stipend. When students put on a play or a film series, both are usually sellouts.

The university reports a welcomed new *esprit* in the dorm because students no longer feel exploited. "We're giving them their money's worth," Shaw says. He contends that it is wrong for universities to compete with the off-campus housing market by attempting to offer similar luxuries. "We have something unique to offer—an educational environment—and we should stick to that."

Denver's two special interest dorms are designed for the serious student. Admittedly, there are a considerable number of students whose interests are less focused, less intense. Michigan State University has created a program in Butterfield Hall

for the "typical student, as opposed to the superior student." Activities include first aid, bridge, weight watching, self-defense, art and swimming. Participation and enthusiasm are high.

Cornell University

The gothic buildings that litter older campuses throughout the country are usually the first to meet the wrecking ball, since their irregular nooks and crannies are said to create maintenance problems. It is precisely the old-fashioned quality of this kind of building, however, which endears it to students, who love its oddly shaped rooms, high ceilings, turrets and towers, just because they are impractical, unique and romantic.

At Cornell University, Risley Residential College is housed in a gothic castle that was given a new life through student initiative, fostered and encouraged by the sympathetic support of the administration. Judith Goodman, class of '71, distressed by the absence of interaction in her dorm, conceived the idea of establishing an "art dorm for non-art majors." After listening to her ideas and helping expand them into a detailed plan of procedure, the university gave her the go-ahead, providing that she could find enough students to fill all 200 beds. One year later, Risley had no vacancies; in its second year there were 300 applications for 70 available spaces.

By persuading the authorities to eliminate maid and garbage service in the dorm, Miss Goodman and her friends acquired $7,000 ($35 per student) for renovating their castle, presenting cultural programs and entertaining guests. With materials contributed by the college and a boundless supply of energy as their only other assets, the students spent one summer remodeling Risley. Basement maids' rooms were made into six practice rooms; other unused spaces were transformed into a darkroom, a dance studio, a theatre and a coffeehouse. Lighting was installed for an art gallery, some soundproofing was added to the music rooms, and dingy walls were painted in vivid colors.

Concerts quickly became a weekly event at Risley, with both townspeople and faculty participating. Films, lectures, karate, photography and ballet classes, wine tasting, poetry reading and student-produced plays are just a part of Risley's cultural ferment. Visiting artists in residence—musicians, art historians, philosophers, musicians or painters—are a regular part of dorm life. Two suites are set aside to accommodate the temporary guests, who live in the dorm and lecture informally. The visitors, along with 30 invited faculty members, regularly eat at the college, thus assuring stimulating mealtime conversation.

Risley is a coed dorm for free spirits; rules are few, with the exception of a mandatory 10-meal per week board plan. However, eating in the elegant dining room with the faculty guests and the notable visitors is considered more of an honor than a duty.

To end their first year with a suitable flourish,

Risley students put on a medieval fair. Everyone came dressed in 15th-century costume, the building was decked with banners and there were jesters, acrobats, troubadours, a bawdy play, a roast suckling pig and madrigal singers. It would be hard to find a dorm that better fulfills Robert Hutchins' criteria for a university: "The whole business about a university and about education can be summed up in a question: Has it vitality: Is anything going on? Is there anything exciting about it? This is the only test of a good university."

Michigan State University

Justin Morrill College at Michigan State University has much in common with Risley College; it offers an exciting living-learning program which succeeds despite the fact that it is housed in a wholly inadequate building. Justin Morrill's students, however, take courses in their dorm as well as live and eat there. Modeled after the separate colleges which comprise Oxford and Cambridge Universities in England, the curriculum emphasizes the humanities and cross-cultural studies. Small, informal classes (writing workshops are limited to seven students) allow professors to discuss, rather than lecture. Independent study is encouraged, since students are able to work closely with their professors, who have offices right in the dorm. Such proximity makes informal, impromptu meetings a common occurrence. Faculty and students often eat together and in this way get to know each other as people, not just as names on a list. The alienated, fragmented existence that is the plight of many students at a large university is not the fate of students at Justin Morrill, which combines all the advantages of the small liberal arts college with the readily available resources of the large university.

The financial advantages of the sub-college as compared to the small independent liberal arts college are obvious: the sub-college can draw on all the expensive resources of the parent university without having to pay the total cost of maintaining those resources. Professors (and their salaries) can also be shared by the big and the little school.

Justin Morrill occupies an undistinguished high-rise building. When the new college took over the former dormitory in 1965, not a single structural change was made. One floor of bedrooms became faculty offices by being refurnished and renamed; recreation rooms and common rooms became classrooms in much the same manner. In 1970, when funds were allotted for remodeling, it was decided to let the students themselves plan how the money would be used. To insure that their decisions were made with care and reason, Justin Morrill became the subject of a seminar offered for credit at MSU.

The 70 students who participated in the course were firm believers in the theory that the environment belongs to everyone, therefore everybody should have a hand in reshaping it. They turned out a mammoth 250-page "Environment Report" that deals with both the grandiose and mundane aspects

of college life. A philosophy of education, the political structure of the university and the inner workings of the state legislature are just a few of the topics bravely tackled in the report. Taught by an architect, the seminar was "a rigorous course in the realistic process of problem-solving."

As a result of their study—and the reality of limited funds—the students decided it would be possible to change their environment without changing the building structurally. The one classroom they redecorated has proved their point: by lowering the ceiling, covering one wall with a blackboard and the others with bright paint, enclosing radiators, carpeting the floor and making "desks" out of carpet-covered orange crates, they created an inviting, warm atmosphere where none existed before.

University of Michigan

Justin Morrill is not unique. Another sub-college is thriving at the University of Michigan, in Ann Arbor. The Residential College within the multiuniversity was conceived in 1965 by several faculty members in the College of Literature, Science and the Arts who mustered widespread support among administrators and students. Students have continued to be involved in high-level decision making since the early planning of the college.

The original site chosen was 1½ miles from the main campus, but students felt that was too far from the rest of the activity of the main campus. About $3 million was spent in renovating East Quadrangle of the main campus. Originally built in the 1930's as a residence for 1,200 men, it is one block square. Only 750 of the 1,200 students at the Residential College live in East Quadrangle. Dr. Donald Brown, a psychologist at the college, says that the residential concept is viable in today's society only when some degree of off-campus living is allowed. A number of seniors have expressed the desire to move back into the residential quarters, perhaps because of the housing shortage in Ann Arbor.

The Residential College at Ann Arbor has, to date, proven successful in trying to make the contemporary university more personal and relevant to the student interested in a liberal arts education. At the end of the freshman year, the most striking impact that the Residential College has had upon its students is that its students are more satisfied with the faculty, administration and fellow students than the students on the main campus.

Sub-colleges can work, but only when they have specific and unique educational goals which are furthered by the residential concept. When disciplines become stronger than the colleges they serve, community sense is weakened and the *raison d'etre* of each is lost.

Cluster Colleges

The American precursor of the living-learning college originated with the Claremont Colleges in Southern California in the 1920's. Their continued success can be measured by the number of students

living on campus, completing the educational goals as set by university policy. The following figures chart 1971–72 enrollment.

	Full Time Students	On-Campus Housing	% Of Students Housed Off Campus
Claremont Men's	789	721	8.7
Harvey Mudd	392	324	17.4
Pitzer	718	629	12.4
Pomona	1285	1083	15.8
Scripps	509	445	12.6

All colleges have agreed to a maximum enrollment of 800, with the exception of Pomona which will go to 1,300. The central housing office thinks that these numbers can be absorbed in campus housing without threatening the related educational value of on-campus residences or provoking a move off campus. An unpublished report from the planner's office states that a large concentration of off-campus students could impose actual or imaginary threats to the greater Claremont community, which would ultimately prove detrimental to the colleges.

Another working example of the cluster concept is the University of the Pacific at Stockton, California. Stanley Green, associate director of housing, believes that the trend to off-campus living that started a few years ago is reversing. His reasons are that

1) Students like the integration of formal education and peer-group contact;
2) Most off-campus living facilities are too far from campus action;
3) Student desires are being met by apartments, the separation of graduate students to give them more privacy, coed living and looser restrictions (e.g., students may now paint their own rooms);
4) More students have been included in all administrative committees.

	Full Time Under-Graduates	Housed At College*	Housed On Campus**
COP	2220	943	1317
Raymond	200	102	19
Callison	247	175	3
Covelli	188	114	26

** of enrollment*
*** elsewhere than college of enrollment*

The majority of students are housed in residence halls at their respective colleges, with freshmen and sophomores required to live on campus unless they live at home, with close relatives or work for their board in someone's home. Additional campus housing includes 300 students in town house apartments and 210 in fraternities and sororities.

A more recent cluster college opened in 1965 at Santa Cruz with 650 undergraduates and 40 faculty

The harshness of living in dormitories with long, double-loaded corridors and two-bed rooms can be softened by enlightened administration policies. However, the best improvements result from abandoning the old dormitory-style living in favor of suites, apartments or single rooms. Some of the alternatives are shown on the following pages.

Remodeling
Public spaces as well as bedrooms should be remodeled to make a residence acceptable to students. Lobby of Tubman Hall, Bowie State College, Md.

Turnkey
Builders can contract to design and construct student housing and let the college staff remain free of management chores until the key of the completed building is handed over. Stanford University, Calif.

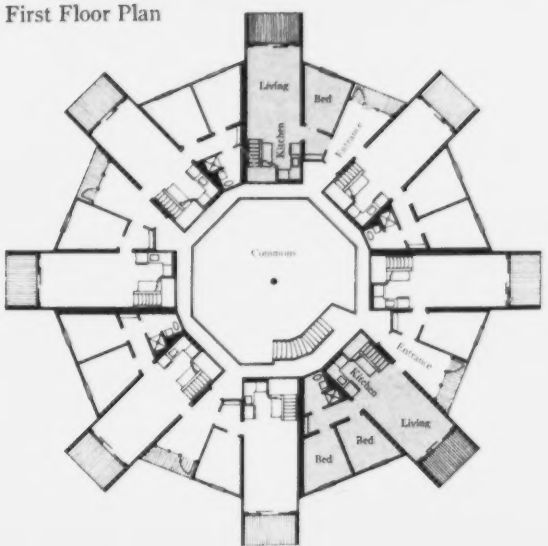
Old Houses

Students like to turn old houses into homes to suit their style of living, but high rents, crime and neighbors' hostility can take the gilt off. Madison, Wis.

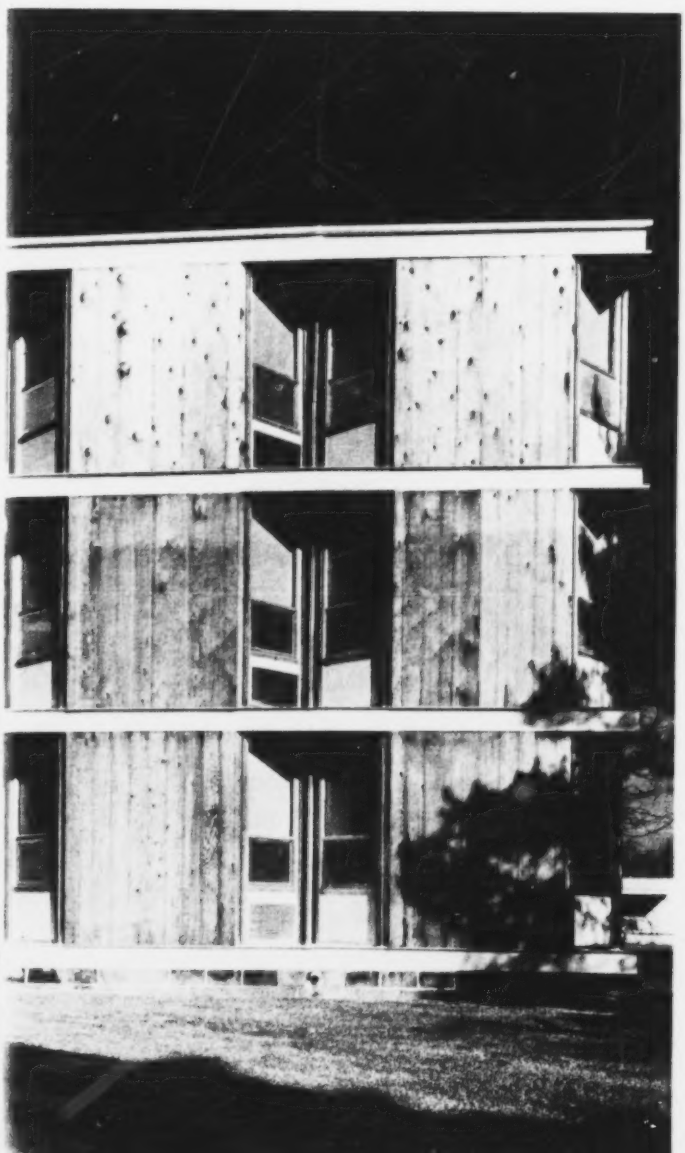
Performance Specifications

Hampshire College wrote requirements for housing 90 students in apartments and invited developers to design and build them. In rapid time, two 2-story buildings were constructed with prefabricated units stacked in a radial pattern. Each apartment has a living room, kitchen and bedrooms for 6 or 7 students. The central area is shared by all apartments.

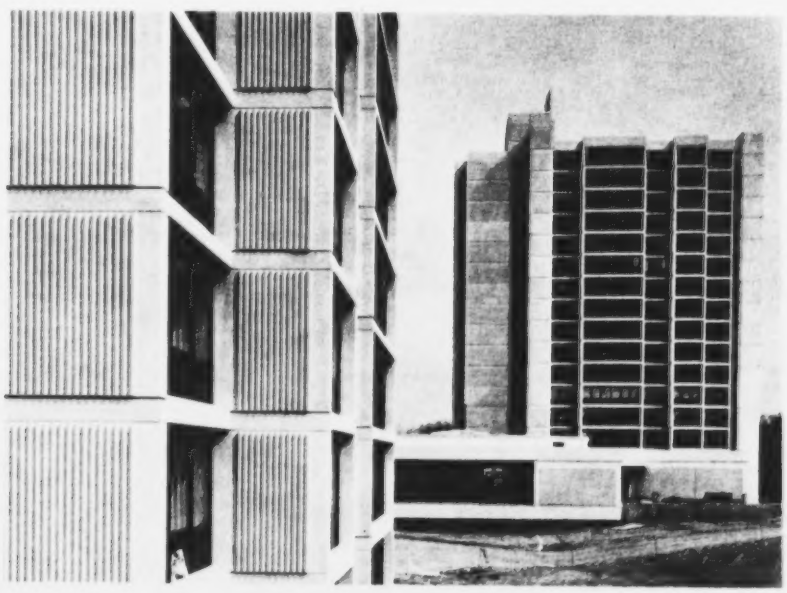
First Floor Plan



Student Participation
Families, married and single students and staff live in apartments designed to meet students' request for a variety of social contacts in buildings of not more than 30 people. University of Maryland.



Industrialized Building
Construction costs for apartment towers for students are said to be lower because of factory production of large-scale components. Buildings were designed by developer to meet client's performance specifications. University of Delaware.

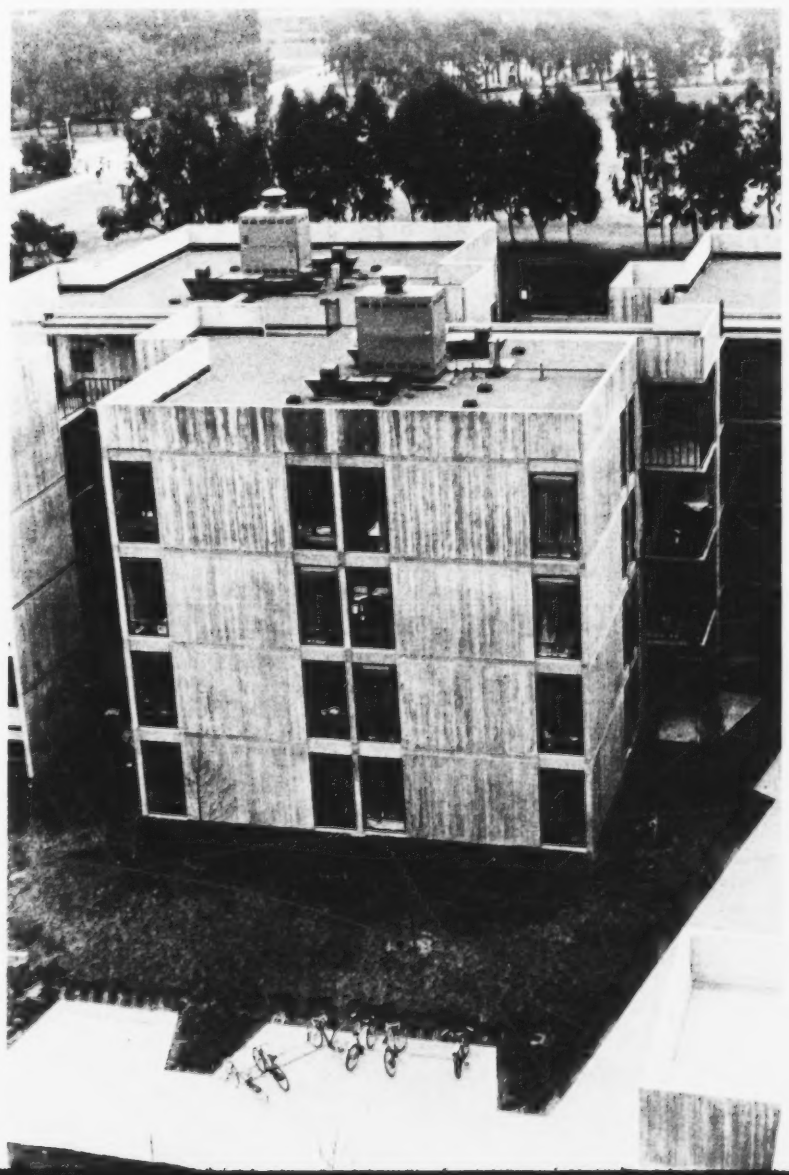


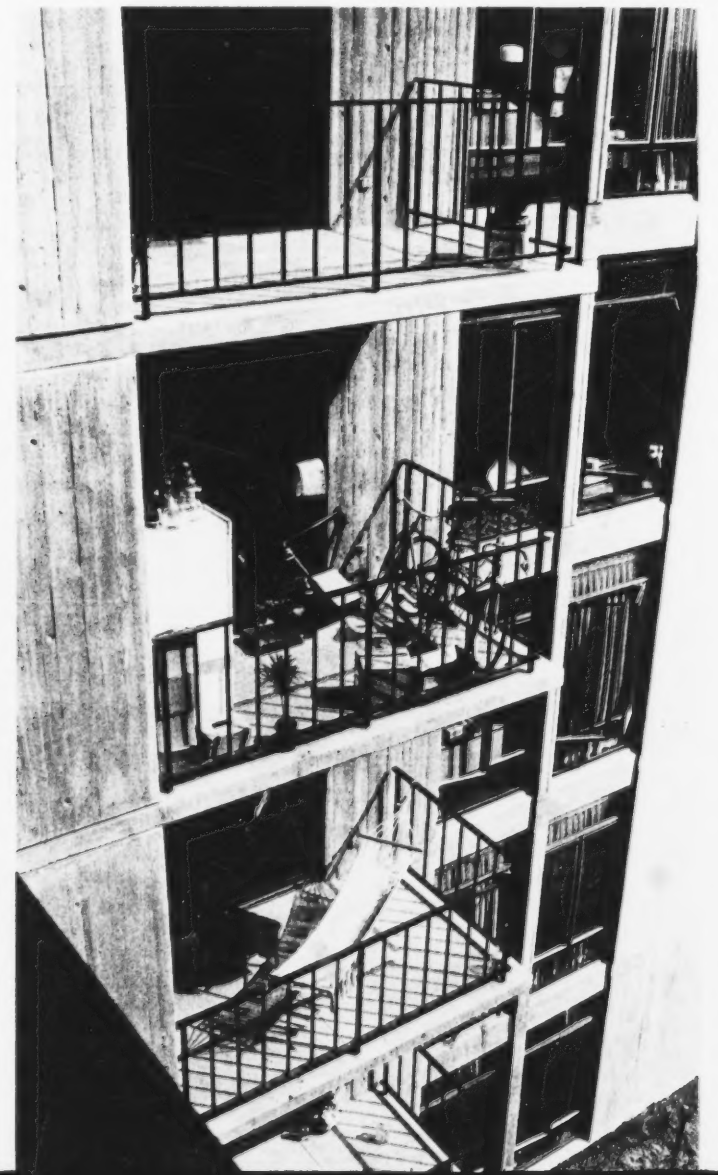
Prefabricated Modules

Houses for twelve students are built with prefabricated "boxes" delivered to the site complete with carpeting and bathroom fixtures. Students live in single rooms that are

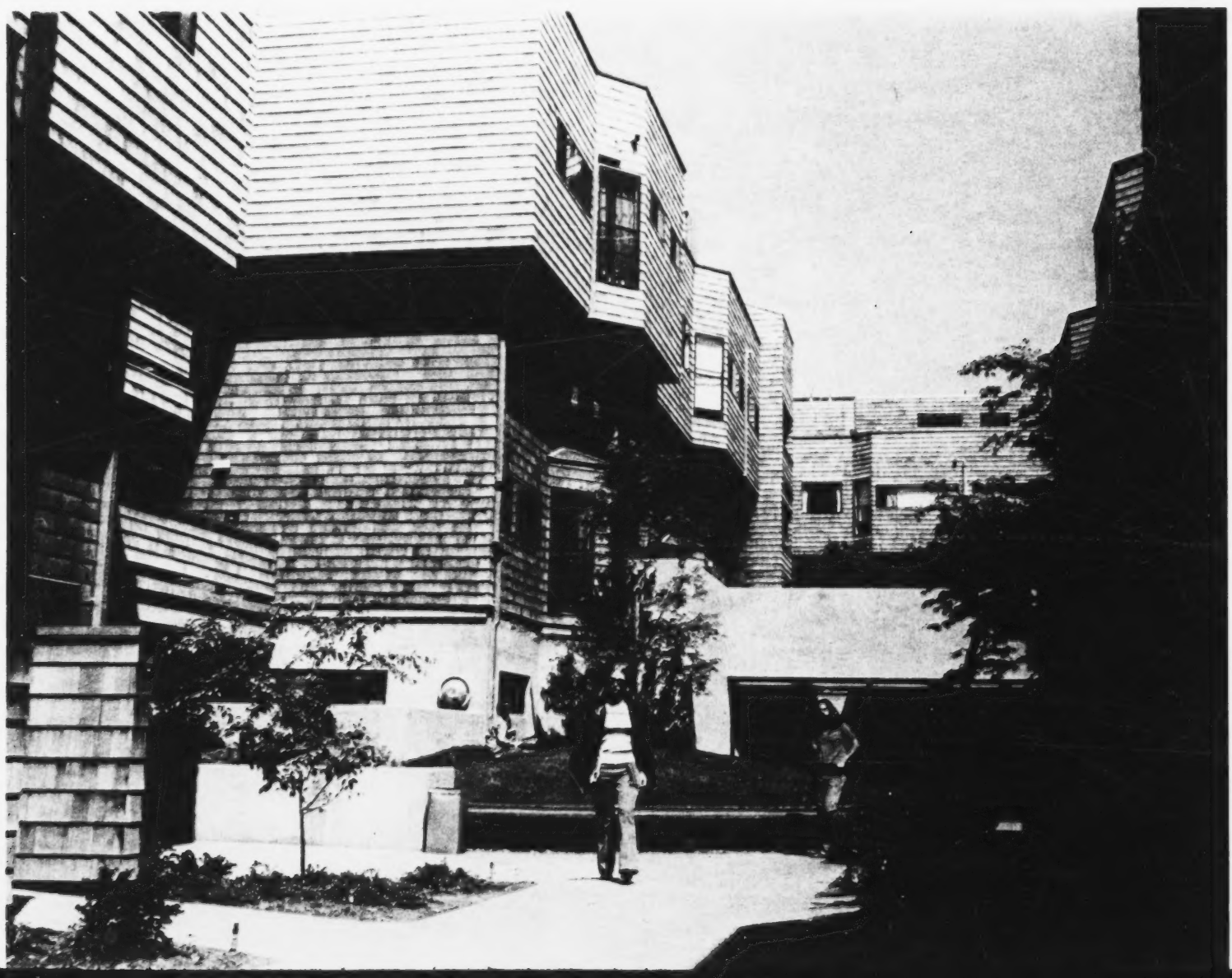
equipped with kits of plywood boxes and shelves that can be stacked or hung on the walls. Beds or desks fit into the window alcoves to give students a wide range of furniture arrangements. Bard College, N.Y.

Systems Building
An integrated approach to building that dovetails the structure with lighting, mechanical and electrical services. URBS, a system developed for college housing, was used for student apartments at the University of California at San Diego.

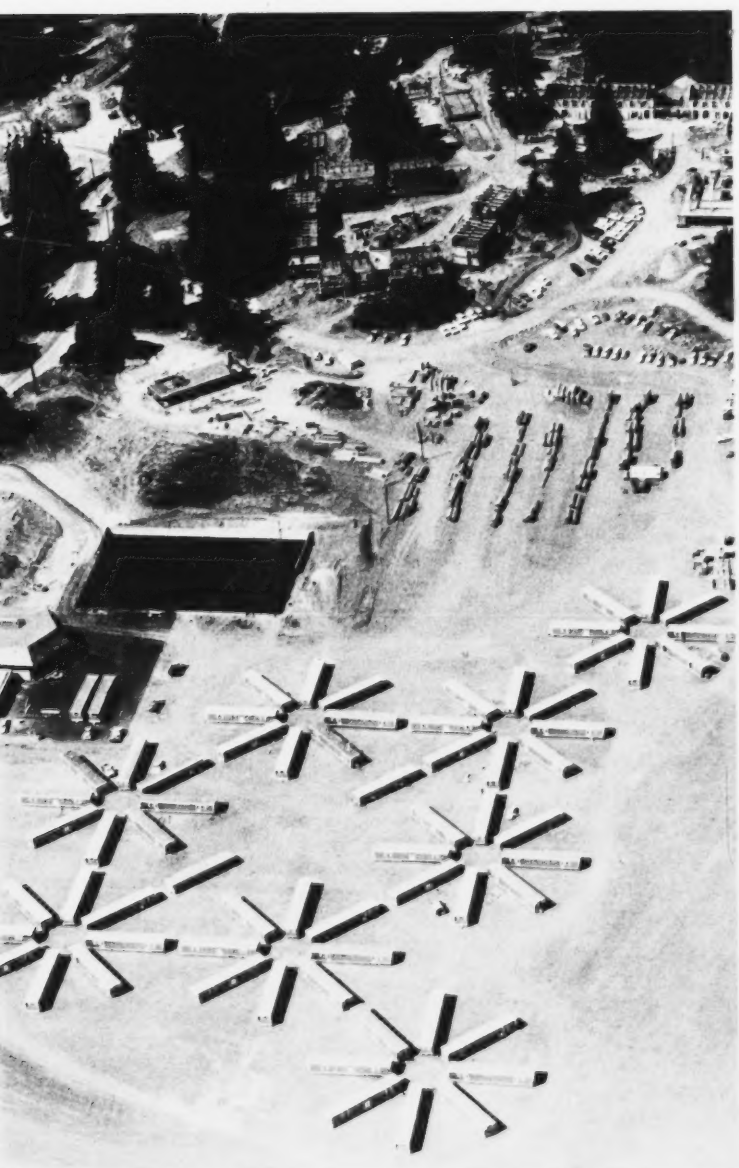


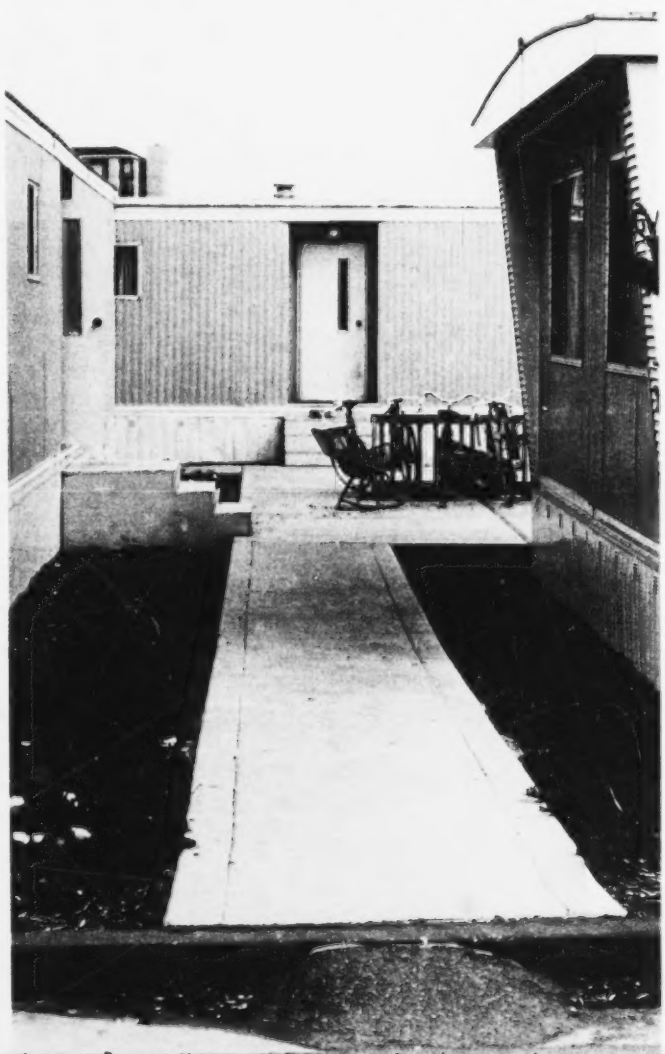


Cooperative Housing
Nonprofit co-op housing offers students a cheaper way to live than commercial housing and gives them experience in managing the financing and running of their houses. HUD assists in financing student co-ops. Rochdale Village, University of California at Berkeley.



Temporary Housing
Trailers provide economical housing while waiting for permanent buildings to be completed. Students often prefer trailers to conventional residences because the scale offers privacy and their own front door (right, Stanford University). When trailers at the University of California at Santa Cruz (left) were removed, the land was reclaimed for a sports field.





Commercial Housing
Furnished apartments built specifically for students are popular at colleges located in towns. If 4 or 5 share an apartment, the individual cost of room and food is comparable to college housing but the personal advantages are immeasurable.

Family Housing
A term preferred to married housing since it can include single students and staff with children. With increasing graduate enrollments the need for family housing also increases. University of Michigan, Ann Arbor.

Students want spaces that allow them privacy when it's needed and the opportunity for gregariousness when the mood takes them. They want to live on a human scale instead of in impersonal dormitories, and they don't want their colleges to be surrogate parents.

members. It was the first residential college of a complex planned to be increased at intervals. In 1972, six colleges were completed and two more opened in temporary facilities.

The campus is located in a scenic area 75 miles south of San Francisco. The colleges are based on the Oxbridge concept, but, unfortunately, the architecture is oriented more towards the surrounding beauty of the countryside than the community spirit of the individual colleges. The newness and experimental nature of this cluster has attracted highly individualistic students. The regulation dorm rooms, double-loaded corridors and gang baths have not proven adequate to many of the students except those in Crown College. Crown College is the one college that was built with an eye to the prime concerns of the residential concept and student-faculty intercommunication, instead of the surrounding view. The architect of Crown was the only architect who did not see the site before planning a college.

The enrollment in the fall of 1972 was 4,450 undergraduates distributed throughout eight colleges. It was planned that 65% of the students would live on campus, but the dorm occupancy rate has fallen considerably below the 90% needed to break even. The actual occupancy rate is probably closer to 80%. Of the students who have moved off campus, many have moved into large old houses or beach and mountain cabins, and some have moved into nearby communes.

Provost Robert Edgar, of Kresge College, which opened in 1971, finds, "There is an early maturation of students now. The concept of the residential college is an anachronism." Nonetheless, he has faith in the general concept of living-learning colleges. He believes that the proper approach has not yet been tried. His idea of a true residential complex is a place where students could simulate the "outside alien world with none of the real adverse influences that exist there." Margaret Mead agreed with him in terming the living-learning complex "ingrained" in its present state.

There was a time when dormitories seemed to be designed to mold student behavior into an orderly, controllable pattern of submission. Now students are molding dormitories. College officials, eager to build dormitories that students will like, are besieging them with questionnaires inquiring about living preferences.

Fortunately, student opinion reflects an amazing degree of unanimity on the subject of housing; a variety of studies and opinion polls all indicate that students want to live in apartments or suites that have private kitchens and bathrooms.

The Penn State study of student opinion specifies that students not only want apartments, but, ideally, single bedrooms within the apartment. They want ample "points of contact" (game rooms, craft rooms, seminar rooms, music rooms) with other students, close contact also with an outdoor area that is inviting and secluded from automobiles, and buildings low enough not to require elevators.

The U.S. Office of Education conducted a dormitory opinion poll in 1969, and the conclusions are the same: apartments are the preferred style of building. If more proof is needed, one has only to visit campuses where there are both traditional dorms and apartments or living suites; the dorms may have empty rooms, but the other residences are invariably occupied. Michigan State University recently remodeled part of Fee Hall, a traditional dorm which was suffering a large number of vacancies. By spring 1971, that part of the building which had been converted into apartments was totally occupied; the remaining portion of the dorm still had 15% of its rooms empty.

The one argument that can be convincingly mustered in opposition to apartments is that they are more expensive to build. However, there is evidence to counter even this contention. If students in a dorm are living two to a room, space must be provided elsewhere in the building for quiet study, television, music, meeting friends, snacking. All of these "extras," in addition to hallways, which must be duplicated on nearly every floor, consume a great many square feet and a great deal of money.

There is evidence, too, to support the argument that maintenance costs are lower in apartments, since students clean their own units. Private baths admittedly cost more to install than gang baths, but they cost less to maintain because, again, they require no maintenance staff. The same can be said for all the public spaces, dining rooms and hallways in traditional dorms; rising labor costs make these areas expensive to maintain.

Apartments offer other financial advantages as well. Since they are suitable for married couples and can house adults of both sexes under the same roof, they can be used during the summer for conventions, seminars and meetings. HUD estimates that year-round occupancy of residences can increase their annual earned income by 25% to 33%.

Apartment living appeals to students because it allows them to lead private lives and still be part of

the college community. Similarly, apartments make it possible to mix different kinds of people with ease: graduate students, faculty with children, visiting lecturers, townspeople—all can live under the same roof. It is this ability to accommodate different life-styles and different kinds of people that makes apartments a favorite with students—and with HUD, which is quite emphatic about its preference for apartments. In a circular sent to all the regional offices in October 1971, potential applicants are warned, "HUD will not approve straight dormitory-style projects unless the long-term prospects for student occupancy are good. . . . Many students, especially upper division and graduate students, no longer want to live in the traditional dormitories. Apartment and suite-style projects, both on and off campus, are becoming more and more popular. Apartment-style projects offer better security to lenders because of better student acceptance and the flexibility for assignment as either student housing or family housing."

Not every campus will find apartments to be the panacea for housing problems. Construction costs are high, and if capital funds are low, the college should consider the alternative physical plan of suites or clusters. The main difference is in the number of bedrooms sharing a kitchen and living room. A workable cluster includes about 12 bedrooms, whereas apartments are most manageable with under six bedrooms.

Both apartments and clusters of single rooms can be designed to include the desirable qualities that are conspicuously absent from dormitories: privacy, individual control over daily schedules, personal space, group space and places to entertain.

Management techniques

People responsible for large building programs are turning away from the established design and construction procedures because of the difficulty of getting buildings completed at their originally estimated cost and date. In the traditional sequence of building, an owner (the client) hires an architect to design a building. The architect hires consultants to assist in preparing plans and specifications for a building that a contractor will build for a lump sum or for cost plus an agreed profit. The contractor is usually selected by competitive bidding.

Early in the discussion stage, the owner and the architect establish how much money is to be spent on the building, and the architect "cuts the coat to suit the client's cloth." Unfortunately, the architect's estimates are often below the contractors' bids for the work—sometimes by as much as 50% below. The owner either has to raise additional funds or he must have the building redesigned to meet the budget.

Two major options are available for an administrator to circumvent uncontrolled budgeting. One is to tell developers what sort of building is wanted and how much can be spent and let them make proposals for designing and building it. The other option is to follow the traditional building sequence but to hire a construction manager at the same time as the architect so that they can work together to establish realistic cost estimates.

The difference between the two methods is that with the former, the client-owner does not hire an architect to design the building. This procedure is gaining ground throughout the country. One of the larger building programs in the United States, the Dormitory Authority of the State of New York has started to use it, and HUD recognizes it for college housing programs. HUD calls the procedure Package Construction Contracts; New York State calls it Turnkey Proposals; and there are other names, such as developer proposals and design-construct contracts.

Under any name, the effectiveness of the method is directly proportionate to the accuracy and completeness of the instructions given by the client to competing developers. These instructions are called performance specifications; they specify how the proposed building must perform. For instance, traditional specifications state the number, size, position and quality of lighting fixtures in a room of fixed dimensions, whereas performance specifications state that a room has to perform a certain function for so many people and as part of its environment it should have a stated level of lighting at the work surfaces.

Although the building will be designed by architects selected by the developer who wins the contract, the client usually retains his own consultant architect, unless there are qualified people on his staff. The consultant will write the performance specifications and oversee the evaluation of the proposals submitted by developers. A detailed and logical evaluation is critical to the success of this

method of developing buildings. When the performance specifications have been written, the owner invites developers to offer preliminary designs on how they propose to meet the specifications. Before this invitation is made, the owner establishes the competence in design, construction, management and bonding of the developers. Also, before making the invitation, the owner decides whether the developers should bid for the costs of the design and construction proposals, or whether he should state what the building must cost and have the proposals based on that price.

New York State is building dormitories at Brockport on the fixed price method. It was decided that each bed should cost about 3% below the prevailing state rate of $6,000, and performance specifications for 1,000 beds that would cost $5,825,000, no more and no less, were written. This eliminates all cost figures from the proposal-bidding documents and leaves the state free to award a contract solely on the quality of responses to the performance specifications.

Brockport drew inquiries from 31 developers wanting to be prequalified in order to make proposals. The university accepted 12 firms, but some withdrew, leaving 5 to finally submit proposals to Brockport's jury.

There's more in this procedure for the owner than simply knowing exactly what the building will cost. There's the time element, the quality of planning enforced by writing performance specifications and the exposure to several design solutions. Brockport, for instance, evaluated five different designs for its campus housing. The Province of Ontario in Canada has a campus housing agency that receives an average of nine proposals for each project.

The architectural design for a package construction contract is usually done by a firm allied with the developer. Few developers employ staff designers, so they team with an architectural firm for specific contracts depending upon the type of building. One of the side benefits is that it breaks the monopoly of college commissions held by some long-established architectural firms and exposes administrators to fresh design solutions by firms that would not otherwise have had access to university projects. It also drastically changes the client's relationship with an architect since the design is managed by the developer.

University of Vermont

The impetus to break from tradition and use performance specifications instead of separate design and construction contracts at the University of Vermont originated with an academic innovation that carried over into management innovation. The academic innovation started in 1969 when an old residence hall was turned into a living-learning dormitory and 120 of Vermont's freshmen were invited to live and study in it. Small seminars and tutorials were created for the program, which many believe succeeded in overcoming three problems

confronting the university: estrangement between student and faculty because of increasing specialization; a lack of relevance attributed to impersonal lecture courses and rigid examinations; loss of a sense of community.

The relevance of this living-learning experiment encouraged the university administrators to decide that the next residences should be designed to meet the additional program needs of a residential sub-college. To finance the dormitory which would house both classrooms and bedrooms under the same roof, Vermont obtained a joint grant from HUD and the U.S. Office of Education.

The management innovation started with Melvin Dyson, the university's vice-president for business and financial affairs, who was convinced that many of the cost over-runs, as well as the bitter battles which inevitably accompany such projects, could be eliminated if an architect and a builder were linked together as a team to design and build a facility. Further problems could be eliminated, he surmised, if the university established a fixed price for the project so that the teams would not be competing for the low bid, but would instead compete for the best design solution to the problem.

The university received a grant from EFL to hire a consultant to develop the contracting procedures and work with a team of students, faculty and administrators to develop a detailed building program for the $5.7 million living-learning complex for 600 students and 15 faculty members. The proposal calls for five low-rise clusters, each containing 27 apartments: three for faculty families and 24 for five students apiece.

Stating that "a simple, clear building envelope will not meet the users' needs," the specifications call for a "noninstitutional building," an integration of living space with classroom and outdoor space, faculty apartments with play areas for children, informal seminar rooms, a snack bar and congenial dining room, conversation "pits," faculty offices, craft rooms, opportunities for both privacy and social interaction, a "homey feeling," and an atmosphere "conducive to concentration." In other words, the program was planned in detail. Not only physical needs, but social, spiritual and intellectual needs were carefully defined.

An involved evaluation matrix was devised so that each of the three final proposals (ten teams applied for prequalification) could be judged objectively by a number of individuals from a variety of backgrounds and disciplines.

Vermont's living-learning center will be ready for occupancy in September 1973. The plans insure a building that can be adapted to a variety of uses. It will accommodate any imaginable interest group—engineers, liberal arts students, nursing, agriculture, mathematicians or language students. The university hopes to get a variety of undergraduates living together, exchanging ideas. Whether all the professors who teach in the dorm will live there, whether the students who live in the dorm will take

all their courses there—these procedural questions can be decided later on, since the building is flexible enough to adapt to many choices.

Hampshire College

At a time when many small liberal arts colleges are struggling to survive, Hampshire College, which opened its doors in 1970, is bursting with students—and pride.

In May 1971, Hampshire decided to increase its revenue by enrolling about 90 new students the following September. The college did not need to increase its faculty or teaching spaces, but it would have to provide beds in an extremely short time. To facilitate construction, Hampshire's architect wrote performance specifications for accommodations so that developers could design buildings that they could complete within the time limit.

The low bidder submitted the most attractive design, and, as it turned out, one of the fastest building schedules on record. Just 88 working days after signing a contract, the developer completed two buildings containing a total of eight beds. Not surprisingly, the buildings were prefabricated in box forms and shipped to the site to be stacked in two stories. All the interior plumbing, kitchen equipment and carpeting were installed in the factory. Students live in duplex apartments with five or six bedrooms, a living room and a complete kitchen. By spacing the prefab modules radially in a circular building, the design allows space for a central common area that was roofed in place.

Although built in a factory, there is nothing institutional about the new dorms. They are garden apartments clad in cedar shakes and located among trees. Each pair of apartments shares an entrance lobby, and after entering the apartment door a resident is in his or her own home which is shared with a few other students. Most students enjoy this mixed, natural way of living. Those that tire of their colleagues' sloppy housekeeping can move to the older dorms with suites.

Hampshire believes apartments are an exciting alternative to regular dorms, and in September, 1972, is opening three more buildings almost identical to the two round structures. The five round apartment buildings will house 220 students and, with a master's house added, will form another House in the college residence system.

Because Hampshire's first two apartment buildings were built on an undeveloped part of the campus, their initial cost had to include a power substation and long water and sewer lines. Nevertheless, the apartments were completed for $8,000 per bed, or $28 per sq. ft. The three similar buildings under construction at this writing are contracted for less.

University of Maryland

Apartment residences were the choice of a committee of students and administration that shaped the requirements for student housing at the College Park campus of the University of Maryland. With

help from both the students and staff of the Department of Architecture, the college formulated performance specifications for the eventual housing of 630 occupants.

The committee specified that all units must be self-sufficient apartments and that no more than 30 people be housed in a single, low-rise dwelling, with a maximum of 75 people per acre of land. All of the other student-inspired specifications focus on the word "variety."

1) A variety of units must be provided, since people have different tastes, attitudes and needs. Four different floor plans were provided: some have single rooms; some house four, others six; some have two bathrooms; and one floor plan is particularly suitable for a family.

2) A variety of people—married and unmarried, undergraduate and graduate students, staff and faculty families—have to be accommodated in the complex. The different types and sizes of apartments make it possible for the university to accommodate a mixture of tenants with ease.

3) A variety of social contacts must be "built in." This has been accomplished in a number of ways: outdoor walkways provide congenial connections between apartments; an outdoor amphitheatre in the center of one building cluster was created out of earth berms so that students have an intimate, sheltered meeting place; there is a basketball court.

The committee not only gave developers design criteria, it also required that the first stage of the contract be built with modular units so that the housing would be available within six months. The $1,540,000 winning bid for the first 258 occupants (just under $6,000 a bed) was completed in 150 calendar days.

Because prefabricated buildings contain identical components, a monotonous symmetry often characterizes their appearance. Maryland's architects avoided this pitfall by setting stairwells and windows at diagonal angles to the superstructure. Another kind of monotony was avoided in the interior of the dorm; the choice of furnishings and fabrics was given to a student team which selected a different color scheme for each apartment.

The fact that each apartment has its own entrance gives an added dimension of freedom to the Maryland dormitories. Unfortunately, it also gives an added dimension of freedom to unwanted visitors and intruders. Maryland, and other campuses across the country, particularly those in urban areas, have been plagued by thefts, muggings, rapes and even murders. Afraid for the safety of their students and aware, too, that adverse publicity might cause a decrease in enrollment, many universities are tightening campus security. It is ironic that students themselves are urging their schools to hire more policemen—the same policemen

who, only a short time ago, were the object of epithets and brickbats.

Leased Facilities

The package construction concept resulting from performance specifications does not relieve a college of finding capital funds to pay for its buildings. However, if capital is tight, the college can ask a developer to build the facilities with his own capital and lease the buildings back to the college. The college pays the rent with operating funds, and at the end of a specified period it can take title to the property. This leaseback arrangement may not be allowed under some state laws or the bylaws of individual colleges.

Developers who design, build and finance facilities are usually called turnkey operators, since all that remains for a client to do is turn the key and enter the finished building. Contracts vary, but usually a client can specify the features he wants in a proposed building, and, for a price, the turnkey builder will supply them. The client does not retain the same control in turnkey contracts as he does when building with his own capital, either through an architect or through performance specifications.

A major drawback to this process is that private investment must make a profit and may sacrifice quality for cost. Proper specifications can preclude undue continuing maintenance costs. Western Washington State College boasts such a successful operation. Built on a 7½-acre wooded site, construction was done by a private contractor in a turnkey operation at a cost of $4,000 per bed. Over 500 students are housed in two-bedroom, carpeted and furnished apartments. Amenities include laundries, saunas and recreational areas. There have been no vacancies since the complex opened in 1970.

Privately owned and operated dormitories are another approach to satisfying housing needs while the university gets out of the developing, building and maintenance business. Development companies build dormitories on private land outside the campuses and pay local real estate taxes on the properties. Facilities are often more luxurious than college dorms—airconditioning and swimming pools—and students pay more rent for the academic year than on campus. Cafeterias in the private dorms operate on a food plan. Few of the rooms are single-occupancy; a typical arrangement is for two double rooms to share a bathroom. Strict rules are made about damage to property, and no decorating is permitted. Occupancy rates vary among the colleges; some are 100%, while others are below the financial break-even point.

One of the largest privately funded high-rise dormitories, a 17-story, triple-tower dormitory for 1200 students at Duquesne University in Pittsburgh, was built at a total cost of $10.3 million. The dormitories, including a swimming pool, rooftop sunbathing terraces and the university dispensary, are leased to the university for 15 years, at which time ownership will revert to Duquesne.

Industrialized building

Multistory apartment buildings have been constructed with large factory-built components in Europe for a couple of decades, but industrialized building has not been assimilated by the U.S. construction industry. Attempts have been made to import or develop industrialized systems, and the secretary of HUD made the encouragement of industrialized housing an official government policy when he launched Operation Breakthrough in 1969. About $60 million has been appropriated to develop 22 housing systems built on nine Breakthrough sites, which the government hopes will effectively demonstrate the advantages of factory-built construction systems. However, the sad fact remains that in this country the full potential for lowering costs and speeding construction has yet to be realized.

HUD's area offices are prepared to advise colleges on opportunities resulting from Operation Breakthrough and package construction techniques. The agency states, "It is HUD policy to encourage the use of innovative techniques that reduce the overall cost of housing. Applicants are encouraged to investigate the many possibilities for using new methods and techniques in designing, contracting and constructing housing projects and to include any such plans in their application." One of the things that HUD means by "new methods and techniques" is factory-built modules (which include walls, floors and ceilings or roofs) that can be trucked to a site and rapidly assembled. These units include interior finishes, bathrooms and kitchens.

New Jersey Campuses

One of the industrialized housing projects supported by HUD outside of its Breakthrough program is for 36,000 students on six campuses of the New Jersey State Higher Educational Institutions. For years, New Jersey had been exporting most of its students to other states for their higher education, but the enormous increase in applications to state colleges made mandatory a rapid expansion of the existing New Jersey schools. Since speed and economy were essential components in planning the student housing, New Jersey chose industrialized construction.

Students will live in apartments with two bedrooms, a kitchen and a living-dining room. Contracts were awarded in December, 1971. Half the buildings will be occupied in September, 1972, and the rest are expected to open a year later. Conventionally constructed dorms would have taken one and one-half years to complete; the shortened construction time, of course, reduces labor costs. New Jersey's two-story apartments cost between $5,000 and $6,000 per bed, as compared with $10,000 per bed in conventional brick dorms with gang toilets and large dining rooms. Some of New Jersey's apartment buildings are six stories high; the per bed cost of these is $7,000, which includes the cost of elevators and added features to conform with fire safety regulations. A major factor in New Jersey's low per-bed cost is the price advantage of mass procurement of factory-built modules.

University of Delaware

Three of the techniques described in this publication were included in the student housing that opened at the University of Delaware in 1972. The students live in apartments that were designed to meet performance specifications and were built with industrialized components. A 17-story and a 16-story tower contain 452 apartments that accommodate 1,300 students and staff. Just over half the apartments have one bedroom, the others have two. All bedrooms contain two beds.

Delaware got the type of accommodation that students want—apartments; but it didn't get them in the setting that national student opinion calls for—small buildings clustered informally. Instead, the apartments line double-loaded corridors in a style severely criticized on many campuses.

After the team of developer, architect and contractor had submitted a conventionally built design, it found that time could be saved and room space enlarged by building with large precast concrete components. The revised plan was accepted by the university. Total time for designing and building the project was 18 months, which compares well with the 36 months required for construction only of a low-rise project for 770 beds built conventionally during an overlapping period. However, industrialized building systems can't take all the credit for the difference since the low-rise project was hit by two labor strikes.

The university paid about $13 million for the total industrialized project, which, in addition to housing, includes a commons building with lounges, seminar rooms and recreational facilities. The developers' contract for $10.5 million included furniture, and the remaining $2.5 million covered fees, administration and site development.

Bard College

Bard College, a private college for 700 students located 100 miles north of New York City, built prefabricated lumber dorms in 1972 to accommodate 84 students in suites of single rooms. Twelve students live in each of seven buildings. Each building houses six students on a floor, and each floor is arranged so that three bedrooms share a shower room and a toilet room. A common room with a kitchen is provided in each building, but, because it is on a separate floor, it does not serve as a living room in the sense of an apartment plan such as the new Hampshire College dorms.

At Bard the onus is on the students to make their bedrooms into self-contained living-sleeping rooms. This is made easier by the kit of furniture units supplied to each resident. All rooms are the same size and shape; some, however, overlook the trees on the downhill side of a steep site, and the others face onto a campus lane. Rooms are lined with plywood painted white and drilled to receive brackets for supporting shelves and furniture. The furniture is also plywood painted white, and, when the dorms opened, the first tenants were offered seven

colors of paint with which to decorate their rooms.

No closets are built into the rooms, but a storage unit is included in the kit along with wall boxes with hinged fronts, drawers on casters for under the beds, book shelves and a desk top. A window alcove is sized to contain a bed or the desk top, and beds can be flat on the floor, normal height or elevated on slotted steel legs. Carpeting varies in color among the rooms, and the public spaces are carpeted so that when a student enters the small building he feels he is really in his own house.

Bard's new housing is technically advanced since it is built with prefabricated "boxes" positioned vertically instead of horizontally. The units were built in a factory that installed the bathrooms, carpeting, doors, etc., before trucking them to the site. This theoretically gives the contractor greater quality control over the components than when they are built in the field. It also reduced the over-all construction time.

Bard paid about $27 a sq ft (or $8300 per bed) for its student housing. This price includes the site work and fees, but it does not include the furniture. (A separate contract for $40,000 covered the bedroom furniture.) It does include $65,000 Bard lost through a bankrupt contractor. Financing for the dorms was aided by a $560,000 loan from HUD.

University of California

Apartments for undergraduate students at John Muir College of the University of California at San Diego are built with components developed from a long search for a better way to build student housing. The search for a building system was funded by EFL and the university. Its objective was to develop new or modified components—such as a fire-resistant structure, partitions and a heating-ventilating-cooling system—and fit them together in a variety of ways to produce residences that guarantee a high-quality environment without looking as if they were all stamped from one mold.

The program, University Residential Building System (URBS), was funded in the belief that it would be widely used throughout California and the United States. However, the state of California drastically diminished its campus building program and used URBS on only one campus. One San Diego residence for 320 students is completed, and another is to be started late in 1972.

URBS hardware was created by manufacturers responding to performance specifications written by consultants hired by the university. The intensity of care in determining the users' requirements distinguishes URBS from commercial industrialized building systems. Circulation, storage, interior climate, comfort, etc., fulfill the needs of students who were surveyed prior to design. Manufacturers' responses were judged on the integrity of their design, how they integrated with other products comprising the building, and their cost. The specifications were based on students living in apartments in buildings of up to 13 stories.

A building constructed with systems components differs from an ordinary building in the assignment of responsibility for the parts. The manufacturer of a subsystem must guarantee the cost, quality, installation and initial maintenance of the materials and work of all the subcontractors who participated in that subsystem. Normally the responsibility is passed along the line of subcontractors who participate in part of a building. One of the attractions for an owner is that systems components manufacturers are supposed to guarantee the installed price and completion date.

San Diego's John Muir College residence was not only the first URBS project; it was also the first federally financed project approved by HUD for construction management contracting. Management contracting attempts to lower construction costs by teaming an experienced contractor with an architect when the working drawings are being prepared. The manager recommends the most economical methods for detailing the building and develops realistic cost estimates to ensure a final design within the owner's appropriation. At John Muir, the construction manager also served in place of a general contractor by working for a fee to supervise the subcontractors. However, after the subcontractors' bids were received, the construction manager could not exceed the contracted price but was eligible to share any savings effected by building for less.

Houses on Wheels

When the shortage of housing is acute enough to require immediate relief, some schools have resorted to mobile homes. While the women's dorm at Bowie State College, Maryland, was being renovated, the men graciously vacated their dorm and moved into a village of mobile homes set up on campus. Although the renovations have been completed, the men are still in mobile homes. Plans have been approved for new dorms for men, but since both dormitories on campus are now occupied by women the men will stay in the mobile village until the new facility is completed.

The trouble with temporary buildings is that there is a danger of their becoming permanent. The men at Bowie State complain of being cramped and crowded in their mobile homes.

However, students at the University of California at Santa Cruz preferred living in temporary trailer residences to regular buildings. Trailers were popular because they were self-contained homes with two double rooms, a bathroom and direct access outdoors. Unfortunately for the students, the trailers were removed when the permanent dormitories were completed. This type of residential surge space can help colleges over housing hurdles. Santa Cruz leased its units for two years and placed them alongside a fieldhouse that served as a temporary

cafeteria. When the trailers left, the university reclaimed the site for playing fields.

Stanford University in Palo Alto, California, assembled a 120-unit mobile project in three months and opened it in the fall of 1970. Designed to operate for five years, the units accommodate four students each, are close to campus and will be replaced by permanent dormitories. Housing a total of over 450 students at a cost of $1.2 million, the project is expected to be self-liquidating.

At the University of Illinois at Carbondale, a small trailer park was created on campus. A temporary measure, the park will be eliminated when scheduled construction begins.

A mobile unit living area called "The Villages" was developed jointly by a private corporation and Southwest Minnesota State College, in Marshall, Minnesota. The units, considered permanent housing by the university, were pulled to the site on wheels and set up in quads of four, each cluster housing 16 students.

Although mobile homes are expedient and inexpensive, they are not without drawbacks. Cost is reduced in mobile home construction because the units are not subject to building code requirements that provide for the health and safety of occupants. For instance, mobile homes do not have to provide an alternative means of egress. (But if the buyer purchases sufficient quantity, the manufacturer will provide extra doors or any other requirements.) Trailer construction is often considered to be of lower quality than house or apartment standards, and mobile home manufacturers have sometimes not accepted responsibility for defects even within the warranty period.

Whatever means a college takes to realize its responsibility for housing its students, it still faces a responsibility for preserving or improving the housing of the families in the neighborhood around it. City universities can no longer hide behind the walls that edge the campus. If the city beyond the walls is deteriorating, then the urban university will deteriorate too. They share a common fate.

Some schools — the University of Chicago, Temple University in Philadelphia and the University of Syracuse, to name a few — began years ago to work with and listen to the surrounding residents. Since Columbia suffered its public agonies, however, no big city school has been able to turn its back on the city around it. This new community concern is inspired not only by the nightmare of Morningside Heights, but by the students themselves, who are moving out into the city to live, to study and to work. This fact alone links the university and the city together in a symbiotic search for survival.

The ways in which universities are responding to this challenge are numerous; their efforts and the considerations and complications involved are, no doubt, worth a separate book. What follows are but a few examples of community-university interaction, since no study of college housing would be complete without some mention of this new and complicated dimension.

MIT is aware that it is not possible to teach social concerns in the classroom while ignoring their existence in the city that surrounds the classroom. Realizing that a course in city planning must be more than just an academic exercise, MIT and the city of Cambridge are involved in a joint venture of urban renewal.

Using university resources, MIT bought three parcels of land in Cambridge. Some of the land was vacant, some had decaying factories on it. After numerous meetings of neighborhood planning teams and MIT officials, it was decided not to remove the land from city tax rolls but to use it for new housing for the elderly. Seven hundred older citizens will live in the MIT project when it is completed.

More recently, the university purchased 20 additional acres adjacent to the campus. Plans call for apartment buildings (both moderate and low income) which will house a mixture of students and city residents. The university's concerns in this project are far from insular: it hopes to increase jobs, tax revenue and available housing in the community; it hopes to be a force for change.

It was a similar hope that motivated the Wisconsin State Legislature to establish a committee composed of community, student and university members at each of the University of Wisconsin campuses to consider and advise on "policies of the board of regents, leases, contracts, building plans, grievances and standards of operation." Each committee must make a report on the state of housing at the beginning of every fall semester. Because their situation was particularly grave, the Madison campus of the university and the city fathers both

contributed funds for a wide-ranging and statistically sophisticated study that suggests many enlightened solutions to the intricate housing dilemma created by a student population of nearly 40,000 existing in the midst of a state capital, population 172,000.

The housing crisis at Madison really began around 1968 when overcrowding in the dorms reached an intolerable peak. The high cost of private housing kept many students on campus who normally would have moved into the surrounding community in their sophomore year. Then the situation was exacerbated by a Board of Regents decision to impose stricter parietal rules in the dormitories. The new rules were in response to several serious episodes of campus unrest. Primarily, the new restrictions succeeded in forcing students off campus. Cut off from expanding on one side by Lake Mendota, students have found accommodation by fanning far out into Madison, renting apartments past the traditional one-mile-from-campus limit.

It is not surprising that the local inhabitants resent the influx of students that has suddenly appeared in their midst. They blame the students for the deterioration of their neighborhoods, and there is a good deal of truth to their accusations. Middle class rents force students to pool resources and overcrowd apartments, creating instant slums. Since students are short-term tenants, landlords have exploited the situation by raising rents and neglecting repairs. Then there is the undisputed fact that the life-style and appearance of the counterculture is so divergent from middle class values that it poses a personal threat to many middle class residents.

It is this confrontation between students and the residents of Madison that the housing study attempts to solve by posing a number of viable alternative to the present collision course.

Providence, Rhode Island, and Stony Brook, New York, are two more college towns that are faced with some of the same problems that Madison has been struggling with. Until two years ago, the State University of New York's Stony Brook campus was cramming three students into rooms designed for two. Now 800 dormitory rooms are empty and the university plans to convert two former dorms into a commuter center and housing for married students.

The students—2,240 of the 7,000 undergraduates enrolled—have moved off campus in search of cheaper rents and greater freedom. The nearby town of Brookhaven is worried about the sudden influx. Residents are complaining about "groupers," inflated rents and run-down buildings. One Brookhaven official observed, "Ideally the university should provide the kind of housing they need." Fortunately, the Stony Brook situation is too new to have provoked anything more than mild irritation.

In Providence, however, the situation is far more desperate. Students from Brown University and the Rhode Island School of Design are displacing low-income families from the inner city. Land-

lords who formerly rented a four-room apartment to a family for $45 are dividing the apartment into two units and raising the rent to $100. Low-income families (most of them Portuguese-Americans), unable to compete for housing in the Fox Point area of Providence, are trying to impose new zoning codes which would prohibit conversion of family dwellings into student apartments. An editorial in a Providence newspaper said, "The best answer is not a shift in zoning controls but in the provision of adequate housing for students by the colleges whose presence swells neighborhood populations and pressures. . . . But wherever the desire to live off campus is the sole factor in creating a neighborhood housing problem, the desire ought to be quenched by firm college policy to require all students to live in available college space."

It is evident that the Providence schools will have to become involved in the life of their city and they will have to seek mutually beneficial solutions to the housing shortage.

Cooperation—an answer for some

If they don't want to live in dormitories, and they can't find a room in town, what do they do? Some students pool their problems and their resources by forming a living cooperative. If a university needs additional living space but does not want to incur the risk of building more dorms, what can it do? Some schools have found a solution to this dilemma by sponsoring cooperatives, and on some campuses the students themselves have formed co-ops.

Living cooperatives first appeared on American campuses in the 1930's, in response to the economic plight and social philosophy then prevalent among students. The cooperative ideology has deep historical roots: the idea that the poor and the powerless can better command their destiny if they band together is as old as the first tribe. Campus cooperatives trace their origin back to the first successful consumer cooperatives which grew out of a weavers' strike in 19th century England. In 1844, in the town of Rochdale, 28 flannel weavers decided, following a strike, to pool their pence and rent a store. Calling themselves the Rochdale Equitable Pioneers Society, they sold goods among themselves. The cooperative flourished, and within a decade their philosophy had spread throughout England.

The Rochdale weavers formulated 11 principles which are still the basic tenets for all contemporary cooperatives. The Rochdale Principles provide for a totally democratic society of equals whose motive is not personal profit, but rather, a better life for all. Many of the ideas promulgated in the 19th century cooperatives have again found favor with today's students. For instance, the idea that in work there is dignity and relevance, the idea that unbridled competition is a destructive force, the idea that it is dangerous to allow outside "powers" to control one's destiny, the idea that democratic principles must guide everyday life—all these cooperative principles are congenial with student life-style today.

It is not surprising then that the number of students participating in cooperative housing has tripled on many campuses in the last five years. At some schools, cooperative housing is thriving while dormitories stand empty. Oregon State reports that there is a continual waiting list for the cooperatives. "We could keep at least two more houses filled," a housing official says.

Cooperative housing is owned or leased by the students who live in the house and who manage it. It is nonprofit housing, and, as such, it provides lodging and meals for students at lower cost. The amount of savings ranges from $200 to $500 a year (as compared with dormitories) and is a result of the fact that students in cooperatives do their own maintenance, management, cooking and food buying. (Each of the co-ops at Oregon State, however, hires a cook.)

At the University of Michigan, where Inter-Cooperative Council owns and operates 25 houses worth $2.5 million, savings amount to $400 per year per student. At the University of Florida, savings

range from 30% to 50%. Lower labor and administrative costs account for most of the savings. In addition, since a majority of co-ops at Michigan and elsewhere are situated in old houses (sometimes defunct sororities and fraternities), the initial cost of purchasing the building is low, which naturally reduces the capital cost per student. Typically, the per bed value of a co-op house is between $2,000 and $4,000, as compared with $9,000 in a new dorm. Buying food in large quantities (an option not open to the off-campus student unless a food co-op is started) also results in substantial savings.

For many students, however, cooperative living is not only a way to save money, it is a way of life. Usually run on a scrupulously democratic basis, students living in co-ops have complete control over their environment. They live a totally independent, adult existence, yet they are not alienated from campus life since they live with their college colleagues. Asked to describe what they like about co-op living, students cite useful work, opportunities for mature and responsible behavior, close communication with fellow students and a stimulating learning environment. For many, the co-op is an ideal way of bridging the transition between a dependent existence in the caretaker dorms and the total independence of off-campus (or post-graduate) life. In the co-op there is always an experienced corps of older members to offer advice and counsel, so that it is possible to feel independent without feeling totally alone.

Living in a co-op not only involves students in the day-to-day maintenance tasks of running a house but also, since co-ops have become "big business," offers an opportunity to assume demanding administrative positions such as house manager, treasurer or member of the board of directors. Members of the University of Michigan's Inter-Cooperative Council (ICC) manage 25 houses, as well as an ambitious program for expansion. Each cooperative house at Michigan functions as an independent entity with its own budget. Membership in ICC has plunged Michigan's co-op students into the intricacies of buying and leasing properties, making loan applications (to banks and the federal government), dealing with zoning boards and civic officials.

Michigan's ICC reveals with understandable pride that banks are eager to lend them money. "We've never missed a payment in forty years, so of course we're a good risk," reports John Achatz, executive secretary. Achatz, who is active in helping cooperatives get a foothold on other campuses, says that the greatest hurdle for new co-ops is establishing credit, since banks are reluctant to take a risk on a new venture.

Not only the business community, but the federal government, too, is beginning to express financial faith in student cooperatives. HUD loans financed ICC's new North Campus Cooperatives, which cost $1.24 million. Seeing the 210-bed facility through from inception (in 1968) to completion (in

1970) was a momentous task. In addition to compiling a detailed grant application, ICC's student leaders also raised $60,000 in private funds to cover the cost of furniture.

One of the great advantages of co-ops is that they are small—30 persons is average—so that each member can feel a close sense of identity with the group as a whole. The scale of the buildings themselves is intimate rather than massive. When ICC decided to build their new large co-op, they came up with a unique solution to the problem of bigness. The North Campus Cooperatives is a cluster of nine three-story row houses, each housing 24 students. Each house in the cluster has a private entryway from a courtyard into the living room. The irregular shape of the building's shell reflects the different-size double and single rooms in the interior. The exterior was intentionally designed to look like the irregularly shaped old houses traditionally used by co-ops. Students who worked with the architects insisted on this non-institutional variety of room size, as well as a high proportion of single rooms, good soundproofing and dining rooms which can double as coffeehouses and film theatres.

HUD has not limited its largesse to the University of Michigan. The government has funded the construction of cooperative dorms at the University of California (Berkeley and UCLA), Nebraska, Portland and Oregon State, Minnesota and Florida. Most of these are student-owned, rather than university-owned. HUD insists, however, that the student corporation receive the support of the university and (if state laws permit) that the university co-sign the loan. HUD officials are disappointed that they have received so few requests for loans to co-ops, since it is felt that cooperatives are a sensible solution to the dilemma created by student rejection of institutional dorms, on the one hand, and the need for more living space, on the other.

The HUD-sponsored project at Portland State University is not a cooperative in the strict, philosophical sense, since students living in the new 16-story building are not required to share the chores of running the apartment facility. The 221-unit Portland project is owned by Portland Student Services, Inc., (PSS), a nonprofit, student-controlled corporation. PSS leases and operates nine other buildings in addition to the new apartment. The corporation fills a desperate need at Portland State, which was originally conceived as a nonresidential university. In recent years Portland was not able to meet the demand for inexpensive housing; as students displaced less-affluent citizens, tensions grew and so did overcrowding. When state money failed to come through for new university buildings on the campus that were to replace several vacant apartment buildings acquired through urban renewal, a coalition of students and enlightened businessmen (one of them, fortuitously, a bank vice president), formed a nonprofit corporation, secured a $10,000 loan, renovated the vacant structures and rented them to students. "If we hadn't had the backing of

the business establishment, we never would have gotten our start," one of the founders of PSS observed. The businessmen gave the students the necessary support and stability, in addition to valuable advice and a mechanism for continuity.

PSS is technically not a cooperative since students who live in the apartments do not share the responsibility of doing maintenance. Rents are cheap—20% to 30% below the market price—because the entire enterprise is nonprofit and efficiently run. PSS hires a few professional management and maintenance people to work with and coordinate the student employees who form the majority of the staff. No reductions in rent are offered, only straight salaries.

PSS has helped start and support a low-cost cafe and a sewing co-op and helped set up and secure funding for the university's day care center. They are hoping now to offer their expertise to other campuses. The student government association at the University of Arizona invited PSS executives to assess the situation in Tucson, where the housing shortage is so acute that students are paying $60 to $120 a month to live in "renovated" garages. The university is reluctant to build more dormitories, since those that exist are unpopular with students.

Rochdale Village at the University of California at Berkeley is another new apartment building which is student-owned and student-operated. Although no one who lives in the apartments is required to do a workshift, the members operate the building by electing a governing council which in turn hires willing students—and pays them a salary—to perform the needed services. Rochdale Village was built with HUD funds on land leased from the university. Like the PSS facilities, Rochdale Village has a waiting list.

At schools such as Portland State, Berkeley and the University of Wisconsin, where cooperatives (or nonprofit housing corporations) have become big business, it is impossible not to be impressed by the fact that the students who operate the projects are guided by a dedicated group of professionals, many of whom lived in the projects as undergraduates, who now are paid for their services. Far from amateurs, these co-op managers run stable organizations with large budgets. The professional staff, which on big campuses is usually organized into a central body to which all the separate co-ops belong, offer not only sound advice and management techniques, but a continuity which an ever-changing student body cannot provide. Naturally, in order to raise the necessary funds to buy, build or lease a building, proof of continuity and a knowledge of accounting are essential.

In order to become established initially, cooperatives usually need support from their parent university. "The college itself can provide the original impetus to bring students together who are interested in establishing a co-op, or at least can provide the student group with a place to meet and access to

a mimeograph machine or a postage meter," said Rex Chisholm, a director of the North American Student Cooperative Organization in the April, 1971, issue of *College and University Business*. "Later, when the students wish to incorporate legally, the college can assist through its attorney. The university planner can be of value in advising the students on what housing is available for purchase in the immediate area and the financial responsibilities that will be incurred in purchasing a co-op facility."

The North American Student Cooperative Organization (NASCO) at Ann Arbor, Michigan, was created by a number of the larger co-ops to assist new, potential cooperatives in getting started. Six hundred co-ops across the country are members of NASCO, which publishes a biweekly newsletter on the problems of student cooperatives. A small staff is maintained to advise new organizations on financing, management and operation.

At the University of Florida's Gainesville campus, a committee on cooperative housing offers sympathetic guidance and advice to campus co-ops. The committee insists on "fiscal responsibility" but otherwise avoids involvement in the internal management of the co-op. Collegiate Living Organization, which got its start on the campus in the 1930's, has, in the opinion of Carl Opp, head of the off-campus housing section, "enabled large numbers of deserving but financially handicapped students to attend the University."

At Oregon State University where 12 co-ops (five privately owned, seven owned by the university) house 580 students, the Inter-cooperative Council holds bi-weekly meetings attended by elected representatives from the co-ops and an adviser from the Dean of Students office. In this way the university keeps in close touch with the co-ops, but does not attempt to direct or manage them. At schools such as Oregon, where students are leasing university-owned property, it is natural to expect that the university would maintain a keen interest in the status of the co-ops.

Some universities are divesting themselves of the unwanted chore of running housing by turning the responsibility over to student cooperative groups. The University of Minnesota has signed a management agreement with the Commonwealth Terrace Cooperative, which agreed to manage a 400-unit apartment development for the university. The management agreement was the solution to a dispute between the university—which wanted to raise rents—and the tenants—married students who were sure they could run the building efficiently without raising rents. The first year has been termed a success by both factions, and the university has extended the contract. Student-tenants have assumed all maintenance chores and all managerial chores; in addition students are running a day care center for children of tenants and neighbors. The university retains ownership of the buildings, as well as responsibility for deferred maintenance and capital replacement. HUD, which holds

outstanding financing on the buildings, approved the new contract. In 1971, Minnesota received HUD funds for another apartment complex which, it is hoped, will ultimately be managed by a similar student cooperative.

Most of the cooperatives discussed thus far have been large-scale operations. At small schools, cooperative living is often a simpler proposition, not demanding as much of students in the way of management. At Oberlin College, several old houses on campus have been turned into cooperatives. The college owns the buildings, but students are responsible for most maintenance and cooking chores. In return, students pay a lower room and board rate; careful management often earns them a refund at the end of the year.

The Oberlin type of cooperative offers students valuable savings as well as another life-style to choose from. Unlike the privately owned cooperatives, however, they do not save the college money, since any savings are passed on to the students. But those who espouse the cooperative philosophy insist that reduced costs (to students and to the university) are only one of many advantages. A brochure issued by the ICC at the University of Michigan has this to say about cooperative living: "The cooperatives understand the basic purpose of residence to be not shelter, but the promotion of a stimulating educational community. This is the spirit of the thesis developed by historians of university life that the style of living and the casual contacts formed at the university can often influence subsequent careers more than formal courses or curricula. Taking on the responsibility for the work and decisions required by the physical operations is an education in itself. But this is supplemented by living in a community which believes that the acceptance of common responsibility for common problems should be an increasingly frequent answer to social problems today. Student cooperatives meet the aspirations of growing numbers of young people to participate in the labor and the decisions which affect them".

The term "cooperative dormitories" is used to describe a wide variety of living arrangements. This variety is one of the unheralded advantages of cooperatives and nonprofit student corporations—their administrative structure and the amount of responsibility that is assumed by the students can change in response to changing student needs. Very recently a new kind of nonprofit dormitory has been added to the list.

With the growth and prosperity of student housing corporations, it was inevitable that private industry would step in and attempt to go the students one better. The Adult Student Housing Corporation in Portland, Oregon, is a nonprofit housing corporation which in the past three years has put up seven apartment complexes (at campuses ranging from the University of Hawaii to the University of Tennessee), all with HUD financing. The apartments are as economically priced as some cooperative apartments, and yet students are not required

to assume any management responsibilities. Housed in two-story, wood-frame, "garden court" buildings, the one-, two- and three-bedroom apartments rent for 30% below the market price on a month-to-month lease. Richard Ulf, of HUD, admits, "I don't know how they do it, but their buildings cost less" than any the colleges are able to put up."

According to Fred Bender, a director of the corporation, there is no secret to its success. "We use standard business techniques, we advertise for competitive bids, hire local architects and put up apartments that are not plush." Bender thinks that students are "the greatest credit risk in the world: we've had few bad debts and low tenant damage."

Adult Student Housing hires resident students (preferably those who are married) to act as on-site managers and maintenance personnel. They are trained for their jobs and, if they perform well, are offered a permanent position with the company after graduation.

The U.S. Office of Education reports that 21 institutions of higher learning closed in 1969–70. The Carnegie Commission of Higher Education warns that an ever-growing number of colleges and universities are headed for financial trouble. Money, as everyone connected with colleges or universities knows, is a desperate problem: colleges can no longer respond to inflation by raising tuition and board rates without running the risk of limiting their student body to the affluent few.

In general, makeshift strategies have been undertaken to ease the financial strain. New programs have been postponed and existing programs curtailed. Budget juggling and last minute scrambling for funds are all too often resorted to. Housing facilities still in the planning stage are frequently considered the most expendable item in the budget when administrators are caught between disgruntled students and inflated construction costs.

While many colleges recognize that all costs—instruction, construction, maintenance and security—are higher, an increasing number of institutions are underestimating projected deficits. A survey of 75% of the country's 762 private accredited four-year colleges showed that the average institution ended its 1968 fiscal year with a $39,000 surplus. The situation quickly deteriorated to a June, 1970, average deficit of $103,000. The best-known colleges with the largest enrollments in the upper Midwest, New England and Mid-Atlantic states are hardest hit. The situation is critical enough for one college president to characterize his colleagues in their search for fiscal solutions as "Kamikaze pilots piloting crash-bound enterprises."

Every indicator, every study warns of the impending growth in the college population. Money, then, must be found to build new dormitories (and to refurbish old ones) so that students can be housed. The alternative is not to build dorms and—as a result—to burden the already over crowded cities with a new low-income population. Those schools not situated in cities have no choice; they must provide dorms or cease to exist. The choice is no longer whether to build, but how to find the money to build.

Residential Space Needs Projections*

(in 000's of sq ft)

1972	1973	1974	1975	1976	1977
Public universities, 2- and 4-year colleges					
217,161	228,881	239,910	250,775	260,825	269,895
Private universities, 2- and 4-year colleges					
168,338	173,122	177,423	181,194	184,369	186,869
385,499	402,003	417,333	431,969	445,194	456,764

(Estimates are based on each bed requiring 180 assignable sq ft in practical usage, about 100 sq ft for living-studying area.)

*Federal Support for Higher Education Construction: Current Programs and Future Needs. HEW, OE. *Report of the Higher Education Construction Programs Study Group, July 10, 1969.*

The Federal Government

The U.S. Department of Housing and Urban Development created the College Housing Program in 1950 to assist educational institutions in the construction, acquisition and renovation of student and faculty housing, student unions, dining halls and infirmaries. The program has provided $4 billion in low-interest long-term loans; in twenty years, 3200 projects have provided housing for nearly one million students. HUD offers two kinds of assistance grants:

- *Debt Service Grants* reduce the interest rate of private market borrowing to 3%. The government pays all of the interest due on a loan that exceeds 3%; the college pays only the principal plus 3%. Public institutions are required to advertise bond sales publicly and to receive competitive bids. Private institutions are permitted to negotiate their own financing, providing they obtain a loan at the lowest market rate available. Debt service grants must be repaid within 40 years.

- *Direct Loans* are made to some colleges that are unable to borrow from private sources at reasonable rates. Usually, the institution issues a bond which is purchased by the government. Security for the bond is a pledge of the project's revenues, augmented as necessary by revenue from other sources. The college repays the principal plus 3% interest; payments are made in equal installments for the life of the loan (40 years or less).

Government loans are the most advantageous method of borrowing money because the lower interest rates (3% in contrast to the current commercial rate of 9%) are passed on to students in the form of lower room rates, since a dormitory is traditionally a self-liquidating, nonprofit entity.

In 1972, HUD had the authority to support $300 million in loans. This $300 million should actually generate $400 million of construction, since some schools match HUD funds with money of their own. The money was divided among 200 projects. This means, of course, that not all requests for funds were granted. Richard Ulf, chief of the College Housing Branch, HUD, explains that black colleges are "at the top of the list in competition," since HUD guidelines give priority to those schools that 1) have the greatest financial need and 2) enroll the most low-income students.

Until a few years ago, half of all HUD loans went to private institutions. That ratio has changed dramatically, however, and now only 25% of government loans benefit private institutions. Ulf fears that the percentage will decrease further, reflecting the malaise of private institutions, many of which have suffered a severe drop in enrollment in recent years. "The government must continue to support private education in this country," Ulf asserts. For this reason, HUD is willing to supply direct loans to

some schools not financially sound enough to obtain loans from banks or through bond issues.

Colleges and universities can no longer count on private investors to put up housing projects on the edge of the campus. Scared away by campus unrest, inflated building costs and the seemingly unpredictable habits of college students, many private developers are disinterested in the student market because they cannot make enough profit.

State legislatures are wary of financing dormitory construction for many of the same reasons that have caused private developers to become apprehensive. There is an additional problem, too, in that state legislatures are not eager to supply funds for dormitories that would give students total freedom to determine their own life-styles. For both political and philosophical reasons, legislators, many of whom reflect conservative views, balk at underwriting apartment dormitories for unmarried students. This is one reason why three-fourths of all students living in dormitories live in facilities funded with federally supported loans.

Educational Authorities

A number of states on the Eastern seaboard have set up "educational authorities" which provide tax-exempt financing to private institutions (in compliance with the Internal Revenue Service Ruling 63–20). Using its tax-exempt status, an educational authority can borrow at a lower interest rate; this savings can in turn be passed on to the federal government, since a debt service loan pays only the interest in excess of 3% on the borrowed amount.

The Pennsylvania Higher Educational Facilities Authority has raised funds for the design and construction of dormitories at the University of Pennsylvania. Revenue bonds totalling $56.6 million were issued with the approval of the Internal Revenue Service. All the buildings will become the property of the Authority, which will lease them to the university for 40 years; after that term they will become the property of the university. Other Pennsylvania schools are, of course, eligible to apply to the Authority for similar tax-free bonds. State educational institutions, however, already have a tax-exempt status. Both New York and New Jersey have similar "authorities."

Although a lot of the financing for college housing comes from the federal government, the rest has to be raised through state and private bonds, notes, debentures and commercial mortgages. These are channeled through various private and quasi-public sources, including cooperatives and state-chartered nonprofit organizations. The remainder is supplied by donations and direct loans.

Raising money to build more dormitories has long been the accepted and traditional method of coping with increased enrollment. Now there is an alternative solution. Many colleges and universities are planning to enlarge their student bodies without adding new dormitories by allowing students to earn a bachelor's degree in three years instead of

four, Dartmouth, Colgate and Ripon Colleges began offering three-year degrees in 1972–73. The Carnegie Foundation gave support to this trend when it awarded a grant to the State University of New York for the development of three-year programs at four SUNY campuses. If, in the future, three-year degrees become as commonplace as four-year degrees are now, it will only be one more instance of the fact that today, on college campuses, traditions are no longer sacred.

Information sources

For further information on projects described in this publication, write to the following:

Student Housing

THE AMERICAN UNIVERSITY
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The American University
Massachusetts & Nebraska Avenues, N.W.
Washington, D.C. 20016

BARD COLLEGE
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Annandale-on-Hudson, N.Y. 12504

BOWIE STATE COLLEGE
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Bowie State College
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Bowie, Md. 20715

UNIVERSITY OF CALIFORNIA
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University of California
Central Services Building
Santa Cruz, Calif. 95060

THE CLAREMONT COLLEGES
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The Claremont Colleges
747 N. Dartmouth Avenue
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CORNELL UNIVERSITY
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North Balch Hall
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Florida State University
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37th & O. Streets, N.W.
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MASSACHUSETTS INSTITUTE OF TECHNOLOGY
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UNIVERSITY OF MASSACHUSETTS
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235 Whitmore Administration Building
Amherst, Mass. 01002

MICHIGAN STATE UNIVERSITY
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W-185, Holmes Hall
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UNIVERSITY OF MICHIGAN
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Ann Arbor, Mich. 48104

STATE OF NEW JERSEY
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Office of Facilities Planning & Construction
State of New Jersey, Department of Higher Education
225 W. State Street — Box 1293
Trenton, N.J. 08625

STATE UNIVERSITY OF N.Y. AT BROCKPORT
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UNIVERSITY OF VERMONT
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Inter-Cooperative Council at the University of Michigan
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Ann Arbor, Mich. 48104

Paul Eisenberg, President
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1802 Southwest Tenth Avenue
Portland, Ore. 97201

Federal Government

Richard M. Ulf, Chief
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Department of Housing and Urban Development
Federal Housing Administration
Washington, D.C. 20411

The following publications are available from EFL, 477 Madison Avenue, New York, N.Y. 10022.

AIRCONDITIONING FOR SCHOOLS
Cooler schools make better learning environments. (1971) Single copies free, multiple copies $0.25

DESIGN FOR ETV—PLANNING FOR SCHOOLS WITH TELEVISION
A report on facilities present and future, needed to accommodate instructional television and other new educational programs. Prepared for EFL by Dave Chapman, Inc., Industrial Design. (1960) (Revised 1968) $2.00

THE EARLY LEARNING CENTER
A Stamford, Conn., school built with a modular construction system provides an ideal environment for early childhood education. (1970) $0.50

EDUCATIONAL CHANGE AND ARCHITECTURAL CONSEQUENCES
A report on school design that reviews the wide choice of options available to those concerned with planning new facilities or updating old ones. (1968) $2.00

ENVIRONMENTAL EDUCATION/FACILITY RESOURCES
Illustrates where and how students learn about the environment of communities and regions using existing and designed facilities. (1972) $2.00

FOUND SPACES AND EQUIPMENT FOR CHILDREN'S CENTERS
Illustrations of premises and low-budget materials ingeniously converted for early education facilities. Booklet lists general code requirements and information sources. (1972) $2.00

GUIDE TO ALTERNATIVES FOR FINANCING SCHOOL BUILDINGS
Chart and book explore conventional and unconventional routes for financing school construction. Includes case histories. (1971) $2.00

HIGH SCHOOLS: THE PROCESS AND THE PLACE
A "how to feel about it" as well as a "how to do it" book about planning, design, environmental management, and the behavorial and social influences of school space. (1972) $3.00

THE IMPACT OF TECHNOLOGY ON THE LIBRARY BUILDING
A position paper reporting an EFL conference on this subject. (1967) $0.50

JOINT OCCUPANCY
How schools can save money by sharing sites or buildings with housing or commerce. (1970) $1.00

PATTERNS FOR DESIGNING CHILDREN'S CENTERS
A book for people planning to operate children's centers. It summarizes and illustrates all the design issues involved in a project. (1971) $2.00

PLACES AND THINGS FOR EXPERIMENTAL SCHOOLS
Reviews every technique known to EFL for improving the quality of school buildings and equipment: Found space, furniture, community use, reach out schools, etc. Lists hundreds of sources. (1972) $2.00

PLACES FOR ENVIRONMENTAL EDUCATION
Identifies types of facilities needed to improve environ-

mental education. (1971) Single copies free, multiple copies $0.25

THE SCHOOL LIBRARY:
FACILITIES FOR INDEPENDENT STUDY
IN THE SECONDARY SCHOOL
A report on facilities for independent study, with standards for the size of collections, seating capacity, and the nature of materials to be incorporated. (1963) $1.25

SCHOOLS FOR EARLY CHILDHOOD
Ten examples of new and remodeled facilities for early childhood education. (1970) $2.00

SCHOOLS: MORE SPACE LESS MONEY
Surveys the alternatives for providing school spaces in the most economical manner. Includes extending school year, converting spaces, sharing facilities, open campus, etc. (1971) $2.00

SCHOOLS WITHOUT WALLS
Open space and how it works. (1965) $0.50

SYSTEMS: AN APPROACH TO
SCHOOL CONSTRUCTION
Toronto, Montreal, and Florida projects and how they developed from the SCSD program. (1971) $2.00

Systems Reports

The following reports are available from BSIC/EFL, 300 Sand Hill Road, Menlo Park, Calif. 94025. Checks payable to BSIC/EFL. California residents add 5% sales tax.

BSIC Special Report No. 1:
Manufacturer's Compatibility Study. (1971) $1.00

BSIC Special Report No. 3:
Building Systems Planning Manual. (1971) $1.00

BSIC Research Report No. 1:
K-M Associates, A Case Study in Systems Building. (1970) $1.00

BSIC Research Report No. 3:
A History and Evaluation of the SCSD Project, 1961-67. (1971) $5.00

Newsletters

BSIC/EFL NEWSLETTER
A periodical recording developments in the systems approach to building educational facilities. Free

COLLEGE NEWSLETTER
A periodical on design questions for colleges and universities. Free

NEW LIFE FOR OLD SCHOOLS
A periodical of case studies about renovating existing school facilities. Free

SCHOOLHOUSE
A periodical on financing, planning, and renovating schools. Free.

Films

These films, resulting from EFL-funded efforts, are available for loan or purchase:

TO BUILD A SCHOOLHOUSE
A 28-minute color film outlining trends in school design. Available on loan without charge from EFL in care of As-

sociation-Sterling Films, Inc., 866 Third Avenue, New York, N.Y. 10022, and for purchase at $93.45 from EFL.

ROOM TO LEARN

A 22-minute color film on The Early Learning Center in Stamford, Connecticut, an open-play early childhood school with facilities and program reflecting some of the best current thinking. Prepared by The Early Learning Center under a grant from EFL and available on loan without charge from Association-Sterling Films, Inc., 866 Third Avenue, New York, N.Y. 10022, and for purchase at $125.00 from The Early Learning Center Inc., 12 Gray Road, Stamford, Conn. 06903.

A CHILD WENT FORTH

A 28-minute color film on inner-city and ghetto schools and school building problems. Available on loan without charge from Modern Talking Picture Service, Inc., 2323 New Hyde Park Road, New Hyde Park, Long Island, New York 11045 or for purchase at $75 from The Library, American Institute of Architects, 1785 Massachusetts Avenue, N.W., Washington, D.C. 20036. A 45-minute version is available for purchase from Larry Madison Productions, Inc., 253 East 49 Street, New York, N.Y. 10017.

NEW LEASE ON LEARNING

A 22-minute color film about the conversion of "found space" into a learning environment for young children. The space, formerly a synagogue, is now the Brooklyn Block School, one of New York City's few public schools for children aged 3-5.

Available from New York University Film Library, 41 Press Annex, Washington Square, New York, NY 10003, rental $7.50, purchase $125.

Credits

Photographs by:

Chris Arnold . . . . . U of C, San Diego

Joshua A. Burns . . . . . Stanford University

Bob Feild . . . . . Rochdale Village
Opposite p. 37

Johnston Photography . . . . . University of Maryland

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Todd A. Watts . . . . . Bard College

Valerie Lucznikowska . . . . . Opposite p. 36
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